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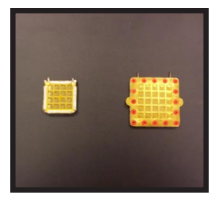

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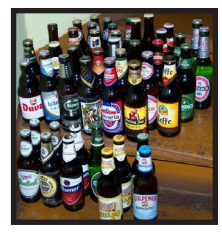

OREDIGGER

SCHOOL OF MINES 1874 COLORADO

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THE VOICE OF THE COLORADO SCHOOL OF MINES, A SUPERIOR EDUCATION IN APPLIED SCIENCE AND ENGINEERING

World News in Brief

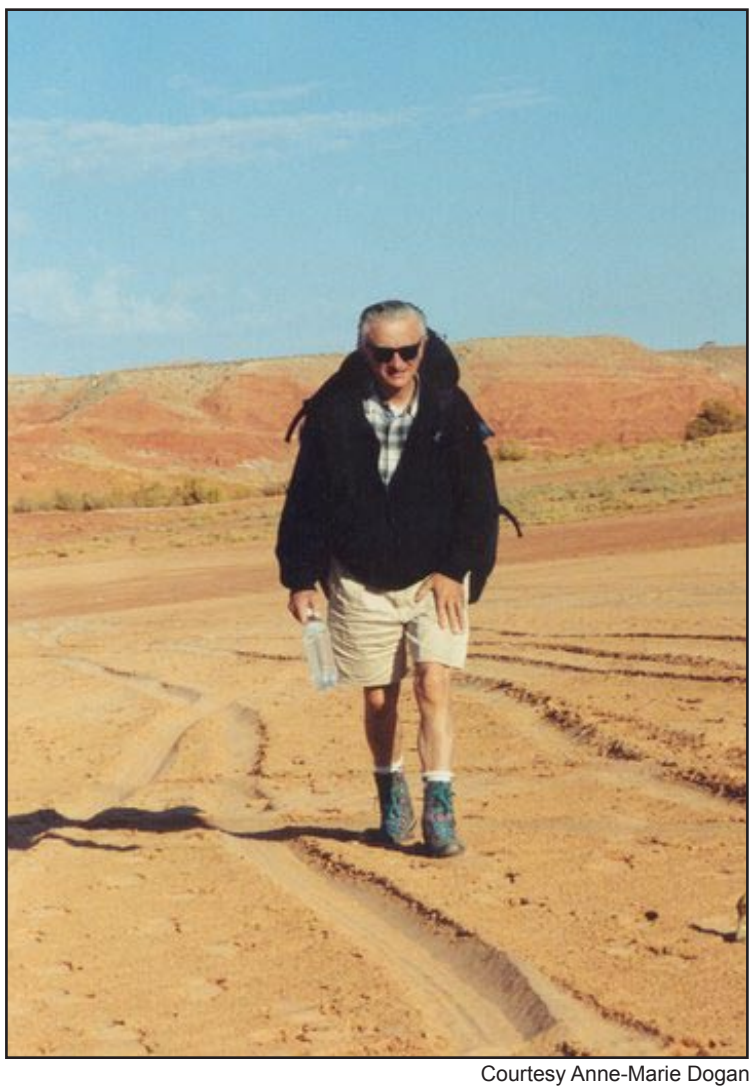
On Tuesday, a magnitude 6.3 earthquake was felt off the coast of the island of Sumatra, Indonesia. The deaths of two children have been reported, and the quake was strong enough to be felt in Singapore and caused several evacuations.

Late Saturday night, a friend told the tabloid *The News of the World* that a former pop-idol made an attempt on her own life with the claims that she is the antichrist. Paramedics found her with a sheet tied around her neck and the other end tied to a light, since then she has been placed on suicide watch at the Promises Rehab Clinic in Malibu.

On Monday, negotiators began discussions in New York to end the nuclear program in North Korea in exchange for aid and "normalcy." The Bush administration is wary of expectations considering North Korea's sponsorship of known terrorism.

Ivan Safronov, 51, of the Kommersant newspaper died after a five story fall from his apartment building. The military-affairs columnist and aggressive critic committed suicide, according to Russian investigators, but colleagues strongly challenged this conclusion, especially considering he lives on the third floor.

Sacramento Kings' Forward, Ron Artest, was arrested Monday on charges of domestic violence and preventing the victim from reporting the crime. Artest has been known for his violent behavior with his notorious brawl with fans that resulted in a 73 game suspension.



Courtesy Anne-Marie Dogan

Pierre Dogan, a professor in the Engineering Department at Mines, passed away in late January after sustaining a serious head injury while paragliding in Mexico.

Remember

A CSM Professor Is Mourned

Zach Aman
Editorials Editor

On January 30, 2007 Pierre Dogan, a professor of five years in the Engineering Department at the Colorado School of Mines, passed away in San Diego, California.

A memo from Dr. David Munoz, also a Professor from the Engineering Division at CSM, said; "I knew that he had an accident while paragliding in southern Mexico and sustained a head injury. His wife, Anne-Marie, had called from Mexico to let us know that he would not be able to teach the Multidisciplinary Engineering Laboratory this spring. She indicated that he would be in Mexico for a few weeks convalescing before they could move him back to the US. At that time I fully expected Pierre to recover. After hearing nothing for several weeks, I tried to call his home in Morrison but reached only a voice mail message. The card announcing his death came in the mail."

The accident occurred on January 8. According to Munoz, Dogan had been coming down fast and steep and his legs hit an object, making his head hit the ground.

The funeral was held on Sunday, February 18 at the Chapel at Red Rocks in Morrison, Colorado.

Andre Dogan, Pierre's son, recalled; "He spent a lot of time grading the papers at depth. He cared a lot about individual students from both an academic viewpoint and personally – who they were and what was going on in their lives. He was very happy to be able to contribute back through academia to the community and really what he saw were the future leaders of the world."

According to Munoz, Pierre was a superb instructor, going so far as to call students up if they were having trouble in his class. Andre Dogan said; "He really enjoyed interacting with the students. He was passionate about learning and improving one's abilities and knowledge of the world. So, he derived a lot of personal satisfaction from bringing his knowledge to students and helping them grow their perception of the richness of the world."

Andre Dogan also added that his father spoke six languages and enjoyed a variety of sports, including paragliding, ice climbing, scuba diving, and mountaineering. "He was really an exceptional guy," Andre noted.

Intermodal Transportation at CSM

Alexandra Harker
Guest Writer

Popular support for an open house on sustainability hosted by the City of Golden on February 28th kept the doors open, with standing room only, past 9pm in the city chambers. The event was a forum for Golden residents to voice their vision for a sustainable future for Golden.

Sustainability is defined as serving current needs without sacrificing the needs of the future. Led by Mayor Charles J. Baroch, the City of Golden has embarked to become a leader in sustainable policy and practices. Former Colorado School of Mines president Ted Bickert emphasized the importance of this effort at the meeting, calling the attendees to think about how current practices will affect the future generations of our children and grandchildren.

Recent interest in institutionalizing sustainability by the City of Golden compliments efforts by students, faculty, and staff at CSM to support intermodal transportation at Mines. The recent completion of a campus-wide transportation survey has led to a vote this spring that could give CSM students an RTD bus pass. On the ballot for campus elections at the end of March, CSM students will have the opportunity to vote on an intermodal transportation fee.

As opposed to including only cars in campus planning, intermodal planning links different transportation networks for the highest effectiveness with given resources, promoting modes of transportation that reduce dependency on the car alone. ASCSM supported the idea, proposed by graduate student Jonathan Meuser and undergraduate student Thomas Wells, voting 22-0 last month to approve the vote this spring for the fee increase.

If passed, the intermodal transportation fee will be used to purchase an RTD college pass for all CSM students in the 2007-2008 school year. The intermodal transportation fee does not dictate the funds be used for RTD service alone. In subsequent years it might be used for other transportation demand management measures, for example, towards funding a circulator bus around the City of Golden.

From 1996 to 1997 there was a circulating bus around Golden that went by the name GUS, an acronym for Golden Urban Shuttle. Even though the GUS bus was discontinued, there are several reasons why a similar bus would be successful now.

One reason is a circulating bus would be able to link CSM students and Golden residents to the coming FastTracks light rail station at the Jefferson County Courthouse. Another major incentive is the federal grant money available for this type of project. In other Denver-area cities, local buses were not initially funded by RTD but through a grant from the Denver Regional Council of Governments (DRCOG) that distributes Congestion, Mitigation, and Air Quality (CMAQ) funding. The City of Golden is eligible for the same funding, and with cooperation from CSM, a circulating bus can become a reality. Following the model of other local cities, once a city-supported route is established for a few years, RTD is then able to provide some level of matching funding.

Many Golden organizations are already discussing increasing transportation options for Golden residents and visitors. The idea of a circulator bus to serve Golden was suggested both at the city sustainability meeting and at the Golden Urban Renewal Authority (GURA) meeting earlier the same week. At both meetings citizens expressed concerns with connecting Golden to the coming light rail. Also, individuals expressed frustration with lack of airport and regional bus service. The Golden Chamber of Commerce has begun to discuss transporta-

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Bus Pass Back For Student Vote

Continued from Page 1

tion options in Golden through an ad hoc committee. One product of the City of Golden's sustainability meeting was the formation of a committee to address Golden's sustainability in terms of transportation.

RTD route organizers have also spoke to the potential benefits of a local route in Golden. In a recent meeting hosted by students from CSM Student Council on Sustainability, RTD officials suggested that in the long-term, CSM may be able to promote sustainable transportation options for the Golden area most effectively by working with the City of Golden to promote a local circulator. By voting for the intermodal transportation fee now, students are increasing options for students in the short run, but also showing the City of Golden and their potential funding partners that CSM has the ability to significantly contribute to the effort.

The reality is if alternate solutions for increased demand in parking are not found, then parking structures will be the only option. The cost for funding a parking structure would fall on students and other potential parking structure users. The relatively small size of CSM's student body makes financing parking garages an expensive endeavor.

This short-term solution would likely bring parking fees in the hundreds of dollars. Like many schools that have taken this path, the plan dealt with the parking problem. The high cost of driving gets most people to find other means like taking a local bus, walking, or biking. This can create cash flow problems when it comes to paying for the parking structure.

With around 70% of CSM students living in the local zip code, a local bus with a short wait could provide a more cost-effective solution. To those students that cannot or will not take a bus, those that can and will take bus will each leave one more parking space available.

CSM Campus Architect, Paul Leef, has been working to keep in communication with both the city and school groups with recent interest in sustainable transportation alternatives in Golden. For now, passing an intermodal transportation fee will give CSM students another chance of securing an RTD college pass for next year and potentially keep the cost of driving to CSM reasonable in both the near and distant future.

If you are interested in supporting the intermodal transportation fee effort, or working with the CSM Student Sustainability Committee on other projects, look at the website at www.sustainable_csm.org/student/ to find information about upcoming meetings. Also, if you are interested in finding out more about options for parking demand at CSM see the CSM Parking and Analysis of Options report available for download at the same site.

FE Meets Biology

Lily Giddings
Staff Writer

The Fundamentals of Engineering exam is one of two tests that engineering students must take before they become accredited engineers. The test is administered by the National Council of Examiners for Engineering and Surveying, and covers the topics most involved in engineering.

Until now, that list has included math, chemistry, computers, physics, mechanics, economics, and ethics, among other topics. The test has lately been revised to include a biology portion.

This change might pose a problem to engineering students at the Colorado School of Mines, as few biology classes are offered to students, and most majors do not require that students take a biology class.

This will be changing soon, in many departments on campus. Aside from the exam, ABET-accreditation standards are being changed to require that engineers have at least a rudimentary understanding of biology. The Chemical Engineering department is working to change the requirements so that students will have to take Biology I to earn a degree.

These changes are coming about as a direct result of the rising importance of biology in many aspects of engineering. Engineers must now consider the effects of their products on not only the consumer, but also on the environment, the resources available, and the potential long term effects.

Chemical Engineering professor Dr. David Marr says; "Biology is becoming a big part of engineering. It's becoming as essential as chemistry and physics." The Chemical Engineering department agrees: they are looking into creating a new degree for Chemical and Biological Engineering. Marr asserts: "We really need to make a home for bioengineering at Mines."

Currently the bioengineering classes that Mines students can take are offered at Red Rocks Community College. Hopefully soon, even within the next year, bioengineering will be offered at Mines.

Spaceport For Orbital Flights Taking Off

Kim Vo
Staff Writer

Virgin customers everywhere now have the opportunity to fulfill their wanton dreams—dreams to be an astronaut, that is. On January 27, 2007, Virgin Galactic made the announcement that they were allying with Spaceport Sweden in order to open a space port in Kiruna, Sweden. Not only would this open the doors for more European customers to brave space, but the new port could open up the opportunity for space flights into the Aurora Borealis.

Virgin Galactic is a subsidiary company within Sir Richard Branson's Virgin Group which focuses on commercial space flights. For two hundred thousand dollars, a ticket could be purchased to board Virgin Galactic's SpaceShipTwo and orbit the earth for 2.5 hours. The cost also covers two to three days worth of flight training. The first commercial flights are scheduled to begin in 2009 from New Mexico.

"The first commercial flights are scheduled to begin in 2009 from New Mexico."

The SpaceShipTwo is designed to comfortably sit six passengers and two pilots on plush leather seats with wide open windows. The SpaceShipTwo was designed by Burt Rutan. Rutan was also the designer of the SpaceShipTwo's predecessor, the SpaceShipOne, which won the Ansari X Prize of $10 million for the first non-government organization that could launch a reusable manned flight into space.

According to BBC News, Branson states that customers "…can experience weightlessness, they will check out that the Earth is round and enjoy space." Though some skeptics are worried about the safety of such commercial flights, Branson states that a Virgin Galactic flight would be "many times safer" than a NASA space flight.

Morgan Gerber, freshman, says; "The idea of the flights would be scary at first. It's not very often we send people up there, so sending mass numbers of people could really be dangerous. But they will probably find a safe way to accomplish it."

Junior Andrew Ferguson says; "There's government supervision on the launching and FAA guidelines to guarantee a safe flight. It's going to be safe."

With the much anticipated Virgin Galactic flights scheduled to depart in 2009, space lovers have to wait patiently to see if Branson's flights are successful. If Virgin Galactic proves to be successful, space vacations can become possible and space flight would not just be limited to government researchers, but for the wealthy and curious.

Adam Shoemaker, junior, has remarked; "There are a lot of potential markets in that area. Space flight could be the new fad that kids will want. It'll eventually be on that show Sweet Sixteen by MTV!"

For more information on Virgin Galactic spaceflights, visit: http://www.virgingalactic.com

Google Expands Its Uses

Mike Stone
Staff Writer

For those tech-nerds at Mines that don't already know, Google released "Google Docs & Spreadsheets" on October 10th of last year. The website is a program where users can log in from anywhere with internet and create, edit and post rich text files for free. (This would include anything like your Biology paper or your Quant Lab Report.)

Some critics claim the site is Google's attempt at recreating Microsoft Word, but why not? Word is a great tool, user friendly and useful, but Google goes above and beyond that to facilitate the man on the move. With Google Docs, all the user's files are arranged in a neat fashion just like email.

Another benefit is the ability for the user to go back through rough drafts and see the revisions they have made. Since the document is available on the internet, it can be accessed from anywhere and you will no longer need that flash drive in your pocket. Finally, once the document is finished it can be posted on the internet, added to your blog, or sent to your friends with the click of a button.

The down sides to "Google Docs & Spreadsheets" include slow uploading, slow saving, a bland and basic interface, and few tools to choose from. Picture sizes are also restricted to 2MB. Most of this, however; will be eliminated with future version releases as the site is new and still working out the glitches. In time, it should be advanced enough to compete with Microsoft Word as "Google Word."

One of the best and biggest reasons to use the site is under the collaboration tab. With this feature enabled, people can view and edit the document simultaneously from across the country with real time updates. So, when a friend is on vacation, but you need help editing that MEL Lab write-up, Google is the way to go. All the creator has to do is invite their colleagues or friends to view their work with an email address.

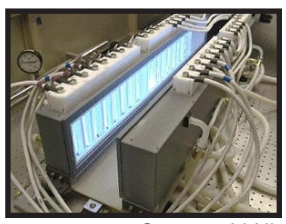
The site can be found at docs.google.com where more web based programs from Google await. These include the famous Gmail and new Picasa Web Album manager.

Final note: This article was made using "Google Docs & Spreadsheets."

Laser In New Light

Chase Hoffman
Assistant Editor-in-Chief

At the Lawrence Livermore National Lab (LLNL) a new record has been achieved for a solid state laser. This laser, also called the Solid State Heat Capacity Laser (SSHCL), can produce a pulsed beam at 200 Hz that has an average power output of about 67 kW.



Courtesy LLNL

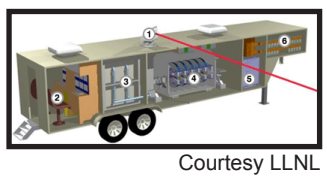
In comparison, Dr. Yamamoto of LLNL said; "In our 25 kW configuration and our 2.5 cm^2 spot size on a one inch steel target, we blow a hole through it in seven seconds." Its application could mean a significant tactical advantage in the battlefield with the ability to destroy targets up to kilometers away.

The goal is to reach the 100 kW mark, which should be sufficient to dismantle and destroy targets easily in combat.

Higher energy lasers have been achieved with the THEL (Tactical High Energy Laser) which can produce a continuous wave (cw) laser with an output power in the megawatt range.

Several successful tests have been made, but THEL is a chemical laser, which depends on a constant source of reactants and is considerably bulkier.

If a 100 kW SSHCL is achieved, the team at Lawrence Livermore believes that if can be fitted into a simple 30 ft. trailer.



Courtesy LLNL

Courtesy LLNL

E-Days Highlight

Rebecca Hubis
E-Days Committee

E-Days is only a few short weeks away! It's time for everyone to get excited!

The committee has been working tirelessly over the past couple months to put together an E-Days that will blow previous E-Days out of the water.

Derek Morgan, director of Student Activities and Advisor of the E-Days committee, feels that this year's E-Days will be at a whole new level.

"The students, faculty, and community have some fairly high standards for E-Days," said Morgan. "But I have no doubt that this year will be a huge success."

This year the committee strived to put together an E-Days with history, tradition, entertainment, food, fun, and an overall awesome weekend.

One big accomplishment was signing Flogging Molly to be the headliner band. Concert chair Richard Barnes felt Flogging Molly was a good choice.

"They are an upbeat band that gives off a lot of energy, which is what students really want to see. Nobody wants to go to a concert and stand around, they want to jump, dance, sing, etc. It's hard to be energetic when the band just acts like it is a job."

Please see SAFAR-E on Page 3

Greek Weekend Recap

Courtesy Jen Doane

Members from the fraternities and sororities participated in the Plato with Play-duo contest as part of Greek Weekend 2007 events. The theme this year was "Mines Olympus" and the slogan was: "Who Needs Olympus, When You Have Zion?" Alpha Phi took second place in the competition with their sculpture of Marvin the Miner.

A Look At The Festivities In Pictures

Courtesy Jen Doane

Over $500 were raised in this year's Penny Wars, an annual Greek Weekend event. The money was donated to the Beta Theta Pi Ski-a-thon, which raises money for the St. Anthony Helmet Program.

The Greek Life Office would like to thank the following chapters and individuals for their dedication to the CSM Greek Community and recognize their outstanding achievements.

Outstanding Fraternity of the Year – *Sigma Alpha Epsilon*
Outstanding Sorority of the Year – *Pi Beta Phi*

Greek Man of the Year – *Marc Guerra (SAE)*
Greek Women of the Year – *Alli Nold (Sigma Kappa)*

Best Philanthropy Program – *Pi Beta Phi*
Best Single Philanthropy Event – *Beta Theta Pi*
Best Recruitment & New Member Program – *Sigma Phi Epsilon*
Best Scholarship Program – *Phi Gamma Delta (FIJI)*
Best Outreach Program – *Sigma Nu*

Most Improved Chapter – *Alpha Tau Omega*
Best Advisor – *Megan Hessee (Sigma Kappa)*

Outstanding Graduating Senior – *Justin Chichester (SAE)*
Most Active Greek – *Brent Koren (Kappa Sigma)*
IFC Man of the Year – *Nick Pfeffer (SAE)*
Panhellenic Women of the Year – *Coree Javernick (Pi Beta Phi)*
New Member of the Year – *Daniel Morris (SAE)*

Greek Weekend 2007 Champions – *Alpha Tau Omega*

Thank you to all chapters for contributing to Penny Wars. Over $500 was raised and donated to the Beta Theta Pi Ski-a-thon supporting the St. Anthony's Helmet Program.

Courtesy Jen Doane

Greek Weekend committee members, Ryan Lowen and Coree Javernick, sort and count change after the end of Penny Wars.

Courtesy Jen Doane

Greek chapters battled each other during the Greek Feud competition held Friday night. Chapters also participated in a Knowledge Bowl.

Courtesy Jen Doane

Students zoomed down West Campus Road as part of the Chariot Races held on Saturday of Greek Weekend. Beta Theta Pi and Alpha Phi won first place with their red and blue chariot.

Courtesy Jen Doane

Members of Alpha Tau Omega pulled their way to victory and not only won Greek Olympics, but were Greek Weekend Champions.

Safar-E Days Soon

Continued from Page 2

Richard also wanted to announce that Single File will be the opening band. If you're curious about their sound, check out their Myspace profile.

Kris Illi, the E-Days Chair, was asked what she felt would be the "don't miss" event this year at E-Days.

"I can't answer this question," she replied. "The whole weekend is going to be frickin' AWESOME. But if I must try, I'd have to pick between Flogging Molly at the concert, the ever-growing fireworks show, Mythbusters giving a lecture, and the field events because there's always so much going on."

So with only a few weeks left, it's time to start planning for Safar-E-Days!

Last year, the packages (which included a t-shirt, a coconut cup, and tickets) sold out before the weekend even started. So this year, don't hesitate! Packages will go on sale the week before E-Days, says Illi. "The packet is $25 and includes an official Safar-E-Days T-shirt, an 18-oz water bottle with the logo, concert ticket, charity BBQ ticket, Comedian Ticket, and a couple of other safari goodies. They will go on sale Monday, March 19th, at 11 AM in the student center."

Make sure you get out there and experience some of the magic that will be Safar-E-Days. Check back here to get the latest E-Days 2007 updates!

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Distributed Intelligence at CARDI

Photo Courtesy of Warner Brothers

Hilary Brown
Features Editor

Mines students learn early that to solve a complex problem they have to cooperate with one another, not only within their area of expertise, but also across disciplines. The Center for Automation, Robotics, and Distributed Intelligence (CARDI) is known for its interdisciplinary approach to research.

CARDI comprises seventeen members that represent at least five different disciplines—Engineering, Mathematics and Computer Science, Metallurgical and Materials Engineering, Environmental Science and Engineering, and Geophysics.

Areas of interest include robotics, sensor/actuator development, smart materials, intelligent control, advanced signal processing, computer vision, networking and distributed intelligence. An interdisciplinary approach is necessary to complete cross-disciplinary projects.

Dr. Kevin Moore, director of CARDI, mentions robotics as an example of an interdisciplinary research area. "Robotics is too broad for any one discipline to deal with. You need mechanical design, electrical engineering, and you need computer science to provide intelligence-type algorithms that tell the robot how to act and behave. It's hard to find a specialist in all three" said Dr. Moore.

"From a big picture, robotics used to be just a robotic arm mounted to a wall. Then, just mechanical engineering and electrical engineering was enough. Now, it is moving towards autonomous mobile systems and you need computer science for that," said Dr. Moore.

"Language is the biggest challenge of interdisciplinary research. As an electrical engineer, I use 'time constant,' but a chemist will probably use the word 'relaxation rate.' When everyone's sitting down and looking at the same differential equation, it turns out to be the same thing. The language of science isn't uniform," said Dr. Moore. He added that despite the challenges of interdisciplinary research, it is also rewarding, because everyone has a common goal and a common understanding of that goal.

Funding for CARDI comes from government and industrial organizations, including the National Science Foundation (NSF), the Defense Advanced Research Projects Agency (DARPA), and Lockheed-Martin.

Three major areas of CARDI research are mobile manipulation, activity recognition, and distributed networks for sensing and control, though there are currently more than ten projects. A major thrust of the CARDI lab is in distributed intelligence, with a focus on distributed networks of sensors and actuators. These networks sense the state of a system and then try to control it.

Unlike a number of other university research programs in distributed networks, which focus only on sensor networks, "we want to do more than just sense stuff, we want to do something about it," said Dr. Moore.

As a result, "CARDI is about not just about putting information systems together, but must also consider the phenomenology—the physical phenomena—involved in the processes we try to control," said Dr. Moore, again pointing to the need for interdisciplinary efforts, which must include domain specialists who understand the physical phenomena involved.

"Language is the biggest challenge of interdisciplinary research... When everyone's sitting down and looking at the same differential equation, it turns out to be the same thing. The language of science isn't uniform."
- Dr. Kevin Moore

One project focuses on autonomy-assisted tele-operation, which involves controlling robots remotely. It combines mobile robotics with computer-assisted video recognition to create a robot that can navigate through a building while an operator monitors its field of vision remotely. "We want to let the robot do what it does best: open doors, navigate, and collect things. This allows the remote operator to focus on recognizing patterns and danger," said Dr. Moore

Another project in the Edgar Mine explores the use of autonomously reconfigurable systems. Twelve radio nodes will be placed in the mine by August, with hopes to install up to 100 by next year. Future application would allow sensors to reroute the airflow and close passages if there was a toxic gas leak, for example.

The project will be jointly completed by an electrical engineer, a computer scientist, and a student. The electrical engineer will focus on radio technology and wave propagation through the mine, while the computer scientist will focus on routing data.

With mobile ad-hoc networks like the one in the Edgar Mine, a group of sensors is located far away from a receiver. To save power, these sensors send their data to a progression of other sensors which eventually reach the base. Most sensors in these networks have a radio to send and receive data and a battery to power it.

An example of an application is a series of sensors placed on a ski mountain. If the snow starts melting at one spot, the data can be sent to the base and help to predict an avalanche. This application highlights the interdisciplinary focus because electrical engineers are needed to design the electronics, computer scientists design the data transmission, and geophysicists determine how the data can predict an avalanche.

Other activities include meetings and colloquia. CARDI members attend a monthly meeting to discuss current research, potential research, and budget use.

CARDI exemplifies interdisciplinary research, while advancing the application of automation, robotics, and distributed intelligence systems. "When deciding whether or not to work at Mines, I looked at CARDI and felt that it was a very viable group. I think it is an asset to the institution," said Dr. Moore.

Seeking Ideal Design at the Colorado Fuel Cell Center

Jason Fish
News Editor

New research is happening at the Colorado Fuel Cell Center, the new lab on campus in the General Research Laboratory building.

Starting last semester, Ryan O'Hayre, CSM alum and new assistant professor in the Materials and Metallurgy department began work on small-scale air-breathing fuel cells.

O'Hayre is aided in his work by two undergraduate students. A.J. Tupper, a Mechanical Engineering major, has been setting up the fuel cell testing station in the CFCC. The other is Bryan Babcock, from the Electrical Engineering department, who has been working on new fuel cell prototypes. "These guys have been doing a great job and really deserve some recognition," said O'Hayre.

The official name of O'Hayre's work is Material Devices for Energy Conversion. According to him, one of the most important goals in this new project is to minimize support systems, size, and, cost. "We want to use cheap processes," he said.

The idea behind these new fuel cells is a process combining oxygen from the surrounding air with a reservoir of hydrogen connected to the cell. By electrochemical half reactions between the two reactants, an electrical current is produced and tapped for use much the same way as a standard Duracell™ battery. The biggest difference between fuel cells and conventional batteries is the only by-product is water, which is what makes the mainstreaming of fuel cells so appealing.

"We want to try and understand performance effects related to ambient climate. It's hard to design a package that can handle Sahara Desert as well as Seattle conditions."
-Ryan O'Hayre

Some of the challenges in fuel cell development deal with support systems. "You see the stack of actual fuel cells surrounded by a lot of tubes, fans, pumps, and tanks, so it gets bulky," said O'Hayre. "The actual stack is only a small part of the whole system."

His projects are focusing on a simple, passive design for a fuel cell that can give out the most power possible while remaining stable in the surrounding environment.

The fuel cells O'Hayre is developing are sensitive to temperature and humidity changes. With the new testing station, he and the students under him will be embedding sensors in the fuel cell material to test the effects of changing temperature and humidity over time, to find an ideal design.

"We want to try and understand performance effects related to ambient climate," said O'Hayre. "It's hard to design a package that can handle Sahara Desert as well as Seattle conditions."

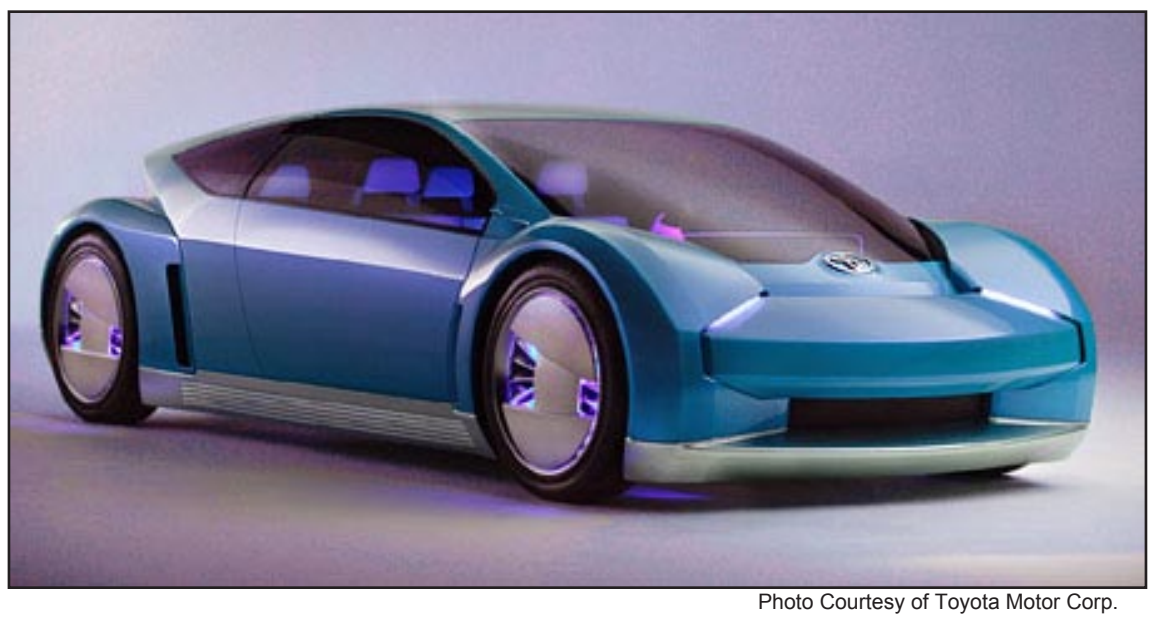


Photo Courtesy of Toyota Motor Corp.

The small size of these fuel cells limits their powering capabilities, but they are useful in a wide variety of small electronic devices such as handheld radios, cell phones, PDAs, and laptop computers.

Some new ideas O'Hayre and his group are working on now include a wicking system that can be attached atop the cell to move the water produced away from the components of both cell and the device it is powering.

Another aspect being addressed is keeping the cells cool while operating. "These cells give off quite a bit of heat when running at full power," said O'Hayre. The research on this subject is considering heat fins incorporated into the fuel cell structure. Different kinds of materials for the basic construction with more ideal thermal properties are also being considered and tested. "We want to be clever about thermally designing the cells to dissipate heat efficiently," said O'Hayre.

The new professor attended CSM and graduated in 1999 with a Bachelor's degree in Materials Science and Engineering and obtained a minor in Public Affairs from the McBride Honors Program. Upon graduation he attended Stanford University in California, receiving his PhD in Materials Science and Engineering in 2004. Heading east, he applied for a position at Mines. "I really wanted to come back here," said O'Hayre.

The research continues at the CFCC and the development of fuel cells remains a hot field in the search for cleaner sources of fuel for today's world.

A Semester in Aarhus

Michael Hoban talks about his semester in Denmark

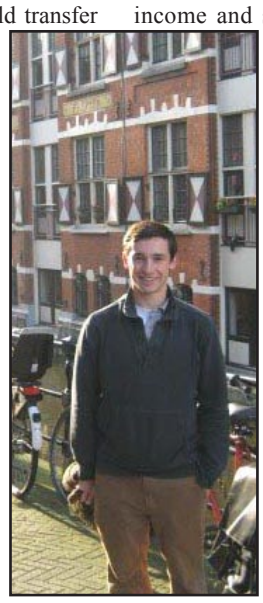
Jason Fish
News Editor

Denmark can often be characterized by its long, windy winters and frequently overcast skies. But, as Michael Hoban found out, it is an interesting country with many fascinating traits, especially for a student on international exchange.

Hoban is a junior in the Mechanical Engineering department at the Colorado School of Mines and took last semester to study abroad at the Engineering College of Aarhus in Aarhus, Denmark as a foreign exchange student.

"It's a college town with about 40,000 students and several different universities," said Hoban. The engineering college contained about 1500 students and Hoban was one of only two Americans.

Rather than taking a break from the CSM curriculum like some exchange students do abroad, Hoban enrolled in classes he could transfer back to Mines. Among his courses he took Aerodynamics, Steel Structures, Vibrations, and a class on computer aided design.


Courtesy Michael Hoban

The way classes are run and how higher education is generally viewed in Denmark differs markedly from CSM.

"You had homework, but they never collected it," said Hoban. "Your whole grade for the semester was based on one test." Students in one of his classes were also required to meet with the professor regularly to demonstrate on a blackboard that they understood the material covered and could perform example calculations.

For Danish citizens, all education is state-funded, a trade-off for higher income and sales taxes run by the socially democratic set up of Denmark's government.

"You would pay a lot on your taxes but the state benefits and welfare system were very extensive," said Hoban. "School was good and important, but definitely not priority one for the students."

The college assigned Hoban a housing arrangement upon his arrival. He shared a suite-style dormitory with ten other exchange students as part of the university's exchange program.

"I had my own bedroom and bathroom, but we all shared a living area and kitchens," said Hoban. His roommates included several students from Spain, Germany, Lithuania, and Romania.

"The Spanish kids were definitely crazy," said Hoban. "They would party starting at eleven at night and not stop till four or so in the morning then not go to class because it was too cold out."

The exchange program at the university focused on giving the visiting students time off to explore the country and surrounding nations.

"I went to Norway, Sweden, Germany, the Netherlands, Hungary, and Austria," said Hoban. He even met up with another CSM exchange student and friend, Amy Dubetz, who was attending a college in Budapest, Hungary the same semester.

While life was more relaxed in Denmark than in the states, the standard of living demanded a higher price.

"It's an expensive society," said Hoban. "If you were to go out for just a burger, drink, and dessert you could spend around twenty dollars easily."

Courtesy Michael Hoban

The public transportation system was much different than that in Colorado. Bus lines were extensive with frequent routes, making waiting time minimal. Bicycles are also a dominant form of getting around. "I rode my bike nearly every day," said Hoban. "They had specific lanes for bicycle traffic with their own lights and rules and there were bike rush hours on the streets everyday."

The social life around Aarhus was geared towards students. Bars would host international student nights and the drinking age is currently 15, and so added a dynamic not found for most students at CSM.

Overall, Michael greatly enjoyed his experience and recommends such an experience to any Mines student.

Adventures in Colorado

Henrik Persson talks about his semesters at Mines

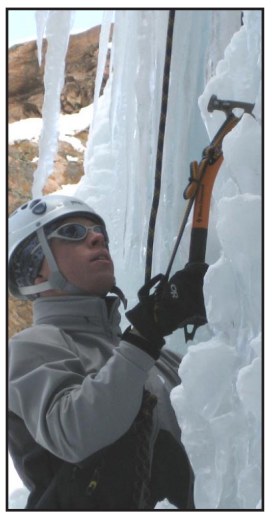
Hilary Brown
Features Editor

Henrik Persson is widening his scholastic opportunities through a semester (or two!) at Mines. Originally from Sweden, Persson began his studies here last fall. Most students who study abroad do so for only one semester.

Unlike those students, Persson is the midst of his second semester. "I went home for Christmas, but when I got the chance to stay here for an entire year, of course I wanted to do that! That gives me a chance to experience the entire year with all seasons and its weather shifts, and it also make it easier to make friends here," said Persson.

Persson is taking four classes this semester: algorithms and design, prob-stats, info systems, and wireless communication.

"The biggest difference is that it is so many [classes] but short lessons here with homework all the time. We only take two lessons in parallel in Sweden, and after 8 weeks we have a final exam that makes up our grade for the whole class. Of course we get homework during the semester, but usually we don't have to hand it in – instead it's our own responsibility to learn what we need for the final."


Courtesy Henrik Persson

He is active in many clubs on campus, including the kayaking club, the bike team, and the ballroom dancing club. "Generally I try to hook up with people, whatever fun is happening, and also come up with fun things to do with people. I go rock climbing, swing dancing socially and with a troop in downtown Denver, skiing, hiking, running…. you name it," he said.

"I realized it's very difficult to really 'live' here without my own car. Taking the bus is time consuming so I rarely do that. The first months, I did find rides with friends or took my bike when I had to go to downtown Denver. Later I bought a car, and it's so much cheaper and easy to have a car here; the gas is 1/3 of Swedish prices and it's not that many complicated rules and yearly tests of the cars here," said Persson.

When asked how he felt about Mines students, Henrik said; "Well! I can't complain at all! You all do a great job with school and are really nice to me, despite your burden."

"[People] are generally, at a first glance, much nicer here, and easy to get in touch with. After a while though, it feels different to keep up the relation I get with people, maybe because the culture makes me expect more out of friends and the way we usually talk to each other. But that may also be because I associate with younger people here then I do in Sweden," said Persson. He added that "Americans are more open at the first step, but harder to really know on a deeper level."

Relationships with family members are also much different. "I have really had problems to understand how you can accept your overprotecting parents you have here! Curfews and restrictions don't apply in that way in Sweden. Your own responsibility and behavior is vital in Sweden, freedom under responsibility!"

Persson says that studying at Mines has changed his outlook on life—"especially it got me to consider what balance I want between work and fun in my life. It has also taught me how much some people really can be 'into' the school here and how they treat their lives (or lack of) outside school."

"I miss the coast and sea where I grew up and the nature (forest) is everywhere in Sweden. We have right of common, to access all non-private areas as long we don't destroy anything, so being in the woods and living in symphony with the environment is on a totally different plane in Sweden, and so much more natural for us," said Persson. "The American way of camping have got me laughing many times, you can pretty much go anywhere only with a credit card."

Courtesy Henrik Persson

Persson has traveled both inside and outside of Colorado during his stay. He climbed a "fourteener" for the first time and traveled on road trips with friends.

Persson found a place to live through the help of Mines and the International Student Office. "It's generally more expensive here, and the conditions are often cleaner in Sweden. It isn't that usual in Sweden to share a house, like a lot of students do here," Persson said, while comparing living conditions.

"Golden and CSM feel a little like a closed happy bubble. It's nice here and you have most facilities you need. But the nearness to Denver is really nice and supplies another dimension of things to do and people to meet."

On the Banks of the Danube

Amy Dubetz talks about her semester in Hungary

Jason Fish
News Editor

Straddling the Danube River, the capital of Hungary, Budapest, sits as it has for centuries. Last semester, this bustling city was home to Amy Dubetz, an exchange student from the Colorado School of Mines.

Dubetz is a junior double-majoring in Chemistry and Chemical Engineering along with pursuing a minor in Public Affairs through the McBride Honors Program.

She returned to CSM this spring after completing a semester studying at the Budapest University of Technology and Economics.

Amy enrolled in a myriad of courses including Probability and Statistics, History of Central Europe, Hungarian language, and a class on society and technology to substitute in her McBride course flow.

While she found the coursework interesting, especially the Hungarian language, the style and pace were different from CSM academics.

"The classes were definitely not as difficult as the ones at Mines," said Amy. "They were all about memorization and not much synthesis."

According to Dubetz, finding living in Budapest was an adventure from the start. Enrolling at the university with about 150 other exchange students, mostly from other European countries, Amy had to ask around for roommate groups seeking housing.

Courtesy Amy Dubetz

"I went there kind of scared, not being familiar with anything there," said Dubetz.

She was eventually able to find housing by asking a group of four exchange students if they needed a fifth roommate. Her arrangement consisted of students from Australia, Finland, Portugal, and Italy. "I got along great with my roommates," said Amy.

Their apartment was located in urban Budapest, close to the banks of the Danube River and near the university. Amy said the housing was nice and comfortable, costing about 200 U.S. dollars a month for all rent and utility expenses.

Away from the classroom Amy traveled nearly every weekend, visiting eleven different countries around Europe. "Everything is so cheap over there compared to the States," said Dubetz.

While traveling, Amy said she found a predominant attitude of dislike for Americans coming from her fellow exchange students and in other countries. "There's definitely a stereotype of the apathetic, selfish, and ignorant American," said Dubetz.

She later found out from a German student at the university that disdain for America is more of a social fad than a fundamental philosophy. "It has been trendy to hate America," said Dubetz. "You are labeled as weird if you don't hate America."

Budapest has a long history, dominated by periods of occupation by the Roman, Mongolian, and Ottoman empires as well as Austrian and Soviet control. The most recent conquerors, the Russians, left much of the city in ruins with bombing and siege campaigns in the mid 1900s. Despite the damage to large parts of the city, including many old and beautiful buildings, Amy said she still found it very intriguing.

"They are rebuilding a lot of the old city and there are still intact castles and houses from a lot of different time periods," said Dubetz.

Budapest has an extensive public transportation system of four subways, multiple tram lines, and a bus network with regular night busses for after-hours travel. University students could buy monthly passes covering all public transportation systems for 10 U.S. dollars.

Courtesy Amy Dubetz

The city also held some exciting times for Amy during her stay. On Monday, October 23, 2006, a riot took place in downtown Budapest. Amy and her roommates had been out at the time and were close to some of the action as they traveled back to their apartment. "That was the first time I ran away from tear gas to get home," said Amy.

The experience of a semester abroad was a very enjoyable one for Amy as she was immersed in a different culture and lifestyle. "People are a lot more patient and calm over there," she said.

Amy went on to say some of this attitude 'rubbed' off on her and she has retained that mental perspective on life as she continues her education at Mines. "It was amazing," said Dubetz.

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This Beer Doesn't Taste Like Spit

Chris Phillips
Business Manager

This issue, we look at Moose Drool Brown Ale – Big Sky Brewing Company's best seller.

Appearance – Moose Drool pours with over 3 fingers worth of head. A finger's worth is retained for quite awhile, so expect to get some of it as you drink the beer. The beer itself is dark brown with a little bit of a reddish color to it that you can only see if you hold it up to the light. It's truly inviting for someone who likes a good dark ale, stout, or porter.

Smell - This has a good, strong smell. It is semi-sweet, with a definite flavoring of both malt and hops. These mix well, and it smells like what I think of when I hear "beer." You can get various smells from the beer at different times – chocolate, hops, and some that I couldn't quite recognize.

Taste - The taste was overall very pleasant. Slightly bitter, but I didn't feel that the bitterness took away from the beer. In fact, it added to it in the brown-ale style. Also, the malt added sweetness to the beer. This sweetness offset any bitterness very well, and I felt that the two tastes played off of each other very well, and the flavor was consistent.

Mouth-feel – This beer was carbonated well. It could possibly use a little more, but not too much. This need is also offset by the fact that the beer is somewhat heavy. I found it to be a smooth, non-watery beer.

Drink-ability – This is definitely something that I would have again. It is not, however, a beer that you can drink very quickly. It requires that you provide enough time in the mouth and take small enough gulps as you drink it.

Overall – I really enjoyed this beer, and I look forward to having another one. I would recommend that anyone looking for good brown ale find a bottle of this!

Note: Neither The Oredigger nor the Big Sky Brewing Company promotes or condones the consumption of alcohol by anyone less than 21 years of age.

QUICK FACTS:
BREWER – BIG SKY BREWING COMPANY, MISSOULA, MT.
STYLE – BROWN ALE
ALCOHOL CONTENT–5.3% BY VOLUME

Geek of the Week ...Rob Donley, Senior

Charlie Frost
Staff Reporter

[Oredigger] When did you first realize you were a "geek"?

[Donley] When I was little, I used to take apart remote control cars and wire the batteries in series and in parallel. I didn't know what the terms meant at the time. All I knew was that I kept winning demolition derbies.

What is the geekiest item you own?

My Lego car. It's got a working V8, manual transmission and four wheel steering.

Do you own any 20 sided die?

Actually, yes. Does anyone remember the game called Magic?!

Most definitely. When was the last time you pulled out the Magic cards?

They have been in plastic sheets since the last day of sixth grade.

When it comes to music, do you geek out on heavy metal?

MEGADETH! And Tool. Lateralus. Enough said.

Who is your favorite member of Weezer?

You know, I think Beck is more geeky than Weezer. You don't have to be a geek to like Beck. You have to be a geek to be Beck.

Computer languages. Are you multilingual?

Fortran and MATLAB save my ass on a daily basis.

Windows or Mac?

Neither. Linux.

Snakes on a Plane. What did you think of it?

Didn't see it, although, Samuel Jackson is the baddest ass mother $%@#! of all time.

Favorite pickup line to use on the ladies?

I don't know. I guess I don't use "lines". With my current girlfriend, I believe it started with "are you gonna finish that?"

One last question. Super Nintendo or Sega Genesis?

As cool as Sonic the Hedgehog is, who can beat the Super Nintendo bazooka? There's no topping Mech-Warrior. And when you get tired of that, there is always Zelda, which is like my virtual alter-ego.

Courtesy Rob Donley
Rob Donley began his journey to "geekiness" with toy cars.

Do you think one of your friends is Geek-of-the-Week material? Send nominations to oredig@mines.edu

A Saucy Surprise

Bandanas' southern-style BBQ a big hit

Andrew Aschenbrenner
Editorials Editor

I've always considered good, affordable restaurants in Denver to be few and far between. One food category that has been missing near Golden is barbeque. This has changed with the arrival of Bandanas Bar-B-Q.

Bandanas is a restaurant enterprise based in St. Louis, MO. The company has seventeen franchises in the St. Louis area, but its Lakewood location (one block north of Union and Alameda) is the only one in Colorado. They specialize in barbeque, and the minute that I got out of my car, I could "smell that smoke." Bandanas has a 9.0 rating on Citysearch, and is highly recommended in all but one user review.

Barbeque is a food category that varies by region, and Bandanas advertises "Southern Style BBQ." Pork, beef, ribs, turkey, chicken, and smoked sausage are their core menu items. According to their website (bandanasbbq.com), their pork and beef is smoked for fourteen hours and the ribs and chicken are smoked for five hours in real wood smokers which operate 24 hours a day.

I decided to order a combo platter to sample as much as possible. Bandanas cooks and serves their meat sauceless and with a dry rub, and provides you with four sauces to choose from at your table. It was nice not to be served meat drenched in sauce. I was happy with the portions, which are plenty for the average appetite.

The service was fast, and the food took only about 15 minutes to come. The pulled pork was so-so, but the beef was very good and the chicken was excellent. The ribs also stood out as they were better than the ribs at most other places. Fried corn as a side is also really good. In total, a meal for two should run about $15-$25.

Bandanas had great food for an affordable price, and the service was good. For those of you over 21, they also have a "happy hour" from 3-6:30pm. It's a good place for lunch or dinner, and take-out is available if you don't have time to sit down for a meal. I definitely recommend Bandanas as an all-around good place to eat.

To get to Bandanas, take Highway 6 to Union/Simms and go south to Cedar. Turn right on Cedar, and the restaurant is on your right past the gas station.

Money Worries

Joanne Lambert helps with a smile

Kevin Duffy
Staff Reporter

Nestled in the foyer of Guggenheim Hall sits Joanne Lambert, ready to take on the challenges of the day. Students come to visit Joanne when they have a problem with their fiscal account, so they are often on edge. Her personable and understanding character quickly makes all who walk into her office at home, as she works with students to remedy any situation.

For the past three and half years, Joanne has worked at CSM, managing student accounts. Although many students come into fiscal services complaining about money, Joanne's favorite part of her job is the personal interaction she has with students. Joanne exclaims; "I understand what it is like to be a college student under a lot of pressure, I try to make things as easy as possible for the students." This give and take manner allows her to approach situations from the student's point of view.

Kevin Duffy/ Oredigger
Joanne Lambert helps students with fiscal services.

"I understand what it is like to be a college student under a lot of pressure, I try to make things as easy as possible for the students."

Joanne expressed her mindset: "You are sitting with a person who has self-worth; I honor and respect their views as an individual as I work with them to solve their problems. Most importantly, though, I greet people with a warm smile and strive to be a good listener." With students as the top priority, it is clear to see why they always leave her office with a smile.

Joanne knows that finances are often a very emotional issue. The root of many problems, however, is a lack of information. Whether it's about CSM billing procedure, student refunds, or just general questions, she is ready to work with students in finding an answer. She also acts as a student advocate in financial matters, making sure everyone receives fair and equal treatment.

When asked what her secret is for keeping the positive energy alive,

Ambassadors to the World

Lily Giddings
Staff Reporter

The first visit to a college is one of the most important deciding factors for many prospective students. The students get to experience a part of college life, decide if they feel like they fit in, and enjoy the campus. Therefore, colleges take the first visit very seriously.

The Colorado School of Mines is no exception. They take pains to ensure that prospective students have the best opportunity to experience the campus. "The most effective way to see if you fit in on campus is to actually visit and see for yourself if you are comfortable," says Sarah Andrews, Student Ambassador Program coordinator.

The student ambassadors are given the responsibility of ensuring that the students who come to visit get all the information that they need to make an informed college choice. Ambassadors lead individual student tours throughout the year, as well as large group tours of the campus and departments at the Preview CSM and Discover CSM programs.

"CSM is unique for its individual tours. Many colleges only offer group tours. This way, it's more personal, and the students can really get a feel for the aspects of Mines that they are most interested in," said Andrews.

Aside from the tours and programs, student ambassadors do direct mailings, to keep contact with interested students, as well as phone-a-thons, calling accepted students to allow for yet another opportunity to ask questions about the school and voice concerns.

"I joined the Ambassador program to give prospective students an 'insider's' perspective of the School of Mines."

According to Andrews; "The ambassadors are there to give prospective students candid answers, things they need to know about the school. They are a big part of the admissions process; they can really help the new student connect to the school in a different way."

Courtesy Sarah Andrews
"It gives me the opportunity to spread my Caribbean warmth and friendliness," said Indar Singh, a Student Ambassador, working at Discover CSM.

Student ambassadors are hired starting the second semester of their freshman year. "I love being an Ambassador because it shows prospective students that there are indeed girls at this school," said Marilou Canon, a freshman Student Ambassador. Currently, the program has 60 ambassadors, including senior ambassadors, who help train new hires. Student ambassadors are from all age groups and majors at Mines. They are friendly people who enjoy the social aspect of the job. Britton Escoe says; "I think the ambassadors really like the opportunity to talk to the new students."

The ambassadors are focused on the impressions of the incoming students. They are able to connect with the students on a different level, sharing their own experiences at Mines to give a deeper perspective to the visit.

"I joined the Ambassador program to give prospective students an "insider's" perspective of the School of Mines. As an incoming freshmen, I would have loved to know the best places to study and eat, for example. As an Ambassador, I can share that advice with potential students," said Chris Peters, a Student Ambassador.

Friendly faces, candid answers, and the sincere interest that student ambassadors demonstrate has a major impact on the impression that prospective students form of CSM.

Poetry Corner

Aria in White: 1st Movement

Piece by piece, the slate is wiped clean:
Nature's blank canvas with a shimmering gleam.
Marching quietly towards the ground at night,
Skier's domain comes back to life.
As the white blanket is unfurled,
The travelers' bane constricts their world.
Unassembled artillery for many a war,
Changing the landscape near and far.
Melting clay in the craftsman's hands,
Purity destroyed by the shifting sands.

~Benjamin M. Weilert

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John Curtis

Meridee Cecil

The Best Math Professors

Heather Barker
Michael Colagrosso
Qi Han
Dinesh Mehta

The Best NHV Professors

Toni Lefton

Dan Miller

Rose Pass

Sue Tyburski

The Best Economics and Business Professors

Cigdem Gurgur
John Tilton
Michael Heeley
Michael Walls
Ed Balistreri

The Best Chemistry Professor:

Daniel Knauss

The Best Chemical Engineering Professors:

Ronald Miller
Annette Bunge
(tie)

The Best Physics I Professor:

Chris Kelso

The Best Physics 2 Professor:

Vince Kuo

The Best Earth and Environmental Systems Professor:

Chris Shorey

guished Professors

ors

top 10

Most Demanding Instructors

Tissa Illangasekare	ESGN622
Alfred W. Eustes III	PE502
Lincoln Carr	PHGN499
Jorg Drewes	ESGN603
Nicholas Harris	TOPICS
Soctt Kieffer	MNGN408
Edward Cecil	PH350
D.H. Gordon	LIFL118
Linda Battalora	PEGN310
Stephen Boyes	CHEN415

This data was accumulated from the Fall 2006 student surveys. The "Ten Most Demanding Instructors" were chosen by taking a ratio of students who rated their professor "Very Demanding." The "Best Professors" were chosen by taking a ratio of students who said their professor was "Superior."

And the Best Professors Are...

Amery, Hussein	Gooseff, Mike	Matlock, David	Rozgonyi/Miller
Ammerman, Ravel	Gordon, D.H.	McNeil/Lusk	Sherk, George
Balistreri, Ed	Greife, Uwe	Mehta, Dinesh	Smathers, Ted
Barker, Heather	Grover, Tom	Mendez, Patricio	Snieder, Roel
Bunge, Annette	Gurgur, Cigdem	Miller, Dan	Speer, John
Carr, Lincoln	Han, Qi	Miller, Ronald	Taylor, Patrick
Cecil, Meridee	Hedenquist, Jeff	Munakata Marr, Junko	Tilton, John
Closs, Graham	Heeley, Michael	Mustoe, Graham	Tsvankin, Ilya
Colagrosso, Michael	Higgins, Jerry D.	Nabighian, Misac	Tyburski, Sue
Cowdrey, John	Hill, Steve	Nelson, Karl	Van Tyne, Chester
Crocker, Joe	Kawahata, Kazuhiro	Pang, Laura	Von Glinski, Monica
Curtis, John B.	Kazemi, Hossein	Pass, Rose	Walls, Michael
Eustes, Alfred W. III	Kemler, Scott	Peralta, Antonio	Warme, John E.
Flournoy, Alex	Lee, Jae Young	Peterson, Larry	Yildiz, Turhan
Gianquitto, Tina	Lefton, Toni	Reimanis, Ivar	Young, Terry

Professors in the above list were ranked "Superior" across the board by every student in at least one class.

Nightlife Wisdom

Sean Kelly
Staff Columnist

Hello everyone! My name is Sean Kelly and until I graduate in May, I will be giving you my words of nightlife wisdom learned in the last five years of my existence. In these articles I will do my best to educate you as to the nightlife offered in Golden and Denver. I won't have time to cover everything I know about Boulder, Ft. Collins, and Summit County nightlife so I'll keep it close to home and focus on my personal favorites. That being said, I strongly encourage all of you to take what little free time you have and spend it productively. So if you're ready to put down the homework, turn off the video games, and get social I offer my knowledge.

If you want to stay close to home and hang out with the friends, check out the local scene. At Table Mountain Inn you can partake of the happy hour specials Monday through Friday from 3-6p.m. This happy hour consists of $4 food, $3 mesa margaritas, and $2 draft beer and well drinks. If you want to head to something a little later with more to do for the sub-21 crowd check out Jillian's happy hour at the Colorado Mills mall. From 4-7p.m. (M-F) and again at 10p.m.-midnight they have $2 bowling games with $1 shoe rentals. During the earlier happy hour you can also grab a pool table for $3/hour, along with $1 Coronas, $2.50 draft beers, and $3.50 house wells and wines. Speaking of bowling, I highly recommend calling up the friends and heading to Golden Bowl from 9-11 PM Monday nights for College Bowling. During this time you can get $1 shoe rentals, $1 draft domestics, and $2 games. It has been refurbished in the last year or so and is a good place to relieve that stress from CAPA. Last, but definitely not least, is the Yardhouse. If you haven't been to this gem you are truly missing out. Daily from 3-6p.m. and Friday and Saturday from 10p.m.-close you can enjoy one of their 115 draft beers for $3.25/pint. Well drinks are $4.25, and the 20+ house martinis are $5.25 (and delicious). They also have an extensive list of very tasty half price appetizers. Out of all the local places this place is my personal favorite; the atmosphere is nice but still down to earth so jeans and a hoody are good for when you want to have a couple beers and watch some sports. The great thing about all these venues is that the under 21 crowd can partake as well. Now, ON TO DENVER!

I know it's can be difficult to get into downtown Denver, but trust me, it is well worth it. If you want to meet some girls (or guys) in bulk, I strongly recommend Croc's on Blake Street. It's got a great Mexican food offering and a dance floor so you can grab some grub and get your groove on. This place is famous for their cheap drinks and laid-back atmosphere. This is the kind of place where you can dress real nice or real simple and no one cares. It's also a great place to learn to dance. The dance floor gets packed and there will be plenty of intoxicated individuals nearby so feel free to look like an idiot on the floor. Just one word of advice: if you dance badly and someone smiles at you, pretend you're doing it on purpose, try to make them laugh, then strike up a conversation. Croc's has the most consistently friendly people you can meet at a big place in Denver. Lastly, this place has my favorite drink specials, beers are usually a couple bucks for domestics and you can get a hold of a strong Tokyo Iced Tea for about $5 (just don't drink these in bulk, I know this from experience). Although Croc's is a wonderful place full of fond (and forgotten) memories, if you want a little more class you need to clean up a bit and head elsewhere.

If you see the suburban Denver lifestyle and all the pretty people, I'll tell you where to party with them. The Lure on 15th and Blake has amazing food, a very nice interior. It can be pricey, but if you come on a Tuesday night they extend happy hour until 10pm. If you want to check out a nice large club, go to Rise. Rise is two levels, has professional dancers (what little clothing they have stays on) and decent techno music. If you want to check out something more upscale and intimate, head over to Hush. This place doesn't have a sign, so look for the velvet ropes on Larimer and 14th. If you want to sip martinis make your way to Tryst. Tryst is a classy lounge with good music, a lot of people, and great tasting drinks. The Jet Hotel is always jumping on Friday and Saturday nights, and if you can get yourself into the downstairs you will not be disappointed.

DVD Releases

March 6th

-Borat (R)
-Fast Food Nation (R)
-Let's Go to Prison (R)

March 13th

-Casino Royale (PG-13)
-The Holiday (PG-13)
-Shortbus (unrated)

CD Releases

March 6th

-Finger Eleven
Them vs. You vs. Me
-KoRn
MTV Unplugged
-Relient K
Five Score And Seven Years Ago
-Notorious B.I.G.
Greatest Hits

March 13th

-Modest Mouse
We Were Dead Even Before The Ship Sank
-Aqualung
Memory Man
-James Morrison
Undiscovered

Case Stays Cold

Courtesy Paramount Pictures

Andrew Aschenbrenner
Entertainment Editor

The Zodiac murders took place in the San Francisco bay area in the late 1960s and early 1970s. They were never solved, and the ciphers that the killer sent to local newspapers continue to puzzle and fascinate.

Paramount Pictures' new movie *Zodiac* attempts to capture that fascination. The movie's story is based on actual case files and *San Francisco Chronicle* cartoonist Robert Graysmith's book about the killings.

Jake Gyllenhaal plays Graysmith, a young cartoonist at the time of the first murder. When the *Chronicle* receives the first Zodiac letter and cipher, Graysmith takes a big interest in solving the code. When he does, co-worker Paul Avery (Robert Downey Jr.) takes notice.

The killer calls himself Zodiac, and the language of his notes combined with his confessions creates panic. The movie largely fails to capture this, instead focusing on the details of the crimes and the characters of those involved.

Mark Ruffalo plays David Toschi, a San Francisco homicide detective assigned to the case. Toschi battles with Avery and struggles against information barriers between police departments as he tries to solve the case.

Zodiac promises a thriller with a cold case twist. What is delivered instead is a rambling character drama that never heats up. It's a very well made movie, but it ultimately leaves the viewer unsatisfied as it fails to develop the story. If you're interested in the case, it's worth seeing, but don't expect to be wowed.

Arriving Shortly

Courtesy impawards.com

Chase Hoffman
Asst. Editor-in-Chief

March 9th

300
Warner Bros. Pictures
Action Epic
Rated R

Starring: Gerard Butler, Lena Headey, David Wenham

Directed by Zack Snyder (also directed *Dawn of the Dead*)

Summary: A re-account of the battle of Thermopylae, a defense of 300 Spartan Warriors led by King Leonidas against the Persian Empire bent on conquering the known world.

Impression: Probably the most important element here is contribution of Frank Miller and the style that his graphic novels demand. *Sin City* was an eye-popper and an instant classic among many. The hopes are to duplicate that success here with an equally badass story, famous throughout the ages.

March 16th

Premonition
Metro-Goldwyn-Mayer
Drama
Rated PG-13

Starring: Sandra Bullock, Julian McMahon, Amber Valletta

Directed by Mennan Yapo

Summary: Linda (Bullock) suffers the terrible and untimely death of her husband, only to find him alive the next day. Each time she sleeps, she transfers between two realities before and after the death of her husband. Frantic and suspicious, Linda rushes to solve the 'inconsistencies' of her husband death before it becomes real in both realms.

Impression: It's a clever little plot and all. Sandra ain't bad either. But this just isn't that exciting. Anyone with all 46 chromosomes can figure out the ending half way through this film.

Dead Silence
Universal Pictures
Horror
Rated R

Starring: Ryan Kwanten, Amber Valletta, Donnie Wahlberg

Directed by James Wan (also directed *Saw*)

Summary:

There was a ventriloquist, Mary Shaw; Who had no children, only dolls.

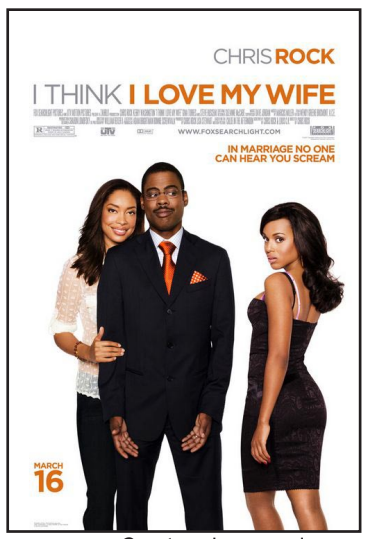
One day, a boy strangely disappeared; When it came to blame, she was volunteered.

They cut out her tongue and buried her dead; Her dolls slept next to her eternal bed.

Since then, this town is shaded by witchery; Constantly plagued by vile butchery

Impression: This is the same dude who made *Saw* happen. Apparently, that creepy talking doll was a bit of inspiration. That creepy doll thing isn't exactly a new concept, but this will be good enough to confirm your previously unjustified distrust of creepy old puppets.

I Think I Love My Wife
Fox Searchlight Pictures
Comedy
Rated R



Courtesy impawards.com

Starring: Chris Rock, Kerry Washington, Gina Torres

Directed by Chris Rock

Summary: Richard (Rock) and Brenda (Torres) are a happily married couple with little excitement. Along rolls Nikki (Washington), an old friend and crush of Richard. Richard starts day-dreaming of his single days and thinks to himself, "I love my wife…I think I love my wife."

Impression: The plot is thin, but don't mis-underestimate (that's for you, G-dub) the innovation of Chris Rock. I know, Mr. Rock's filmography is less than impressive, but give the man his due. He does have more creative control here, which is good for everyone.

Reel Geek

A film geek writes about geeks on film

Jen Schneider
Columnist

One of my film students said he saw *Little Miss Sunshine* last week. When I asked him what he thought of it, he replied; "It made me squirm." I hadn't seen the movie yet, but I had heard its premise, and figured I knew pretty well what he meant.

Courtesy impawards.com

I remember being ten years old or so, and being packed into my grandmother Ruby's Plymouth station wagon for a road trip from Boise, Idaho, to San Diego, California, with stops planned all the way down the coast. She let me bring my best friend Vicki Parker, and tricked out the back of the wagon with a scratchy wool blanket and pillows for us to lay on, a stack of *People* magazines, and a cooler with cans of coke, cool ranch Doritos, and Oreos. Me and Vicky were pretty dang excited.

Ruby is seriously eccentric, but she's also loaded, so we figured we'd probably score some good souvenirs. And Disneyland was on the itinerary. What ten-year-old wouldn't be thrilled?

What I hadn't counted on was being wickedly carsick the entire time. All I wanted to do was sleep so that I wouldn't barf every five minutes, but that was a total affront to Ruby's sense of what a road trip sightseeing adventure was supposed to be. She made sure we were fully appreciating every redwood, every freeway exit, every coastal feature. If I even dared lean my head against the window, or shut my eyes longer than to blink, she'd threaten to pull that car over, dammit.

In short, she made us completely miserable.

Plus, we all shared hotel rooms at every nightly stop (Ruby was loaded, but she was also extremely frugal). Ruby's a big gal, so she snored all night long, then rudely roused us from our beds at 6am so we could get on the road.

There are more details to this trip that I won't bore you with here--one involving some not-so-virgin Mai-Tais, another involving Clint Eastwood in Carmel, California. Anyway, my point is that when I saw *Little Miss Sunshine*—the ultimate family roadtrip movie—I didn't feel squirmy. I felt at home.

I hate to give too many details about *Sunshine* here, because its beauty is in its details: the horn that won't stop honking, the mute teenage son, the amazing final dance routine (watch out, *Napoleon Dynamite*). The meat of this movie is in its characters and their struggles and triumphs, rather than in the plot itself, which is why it can get away with so many continuity errors.

No, I won't summarize the plot. Rather, I think it makes more sense to compare *Sunshine* with another film about modern American family angst: the 1995 Todd Solondz film *Welcome to the Dollhouse*, and to talk about why one ends in cold cynicism, the other in hope.

The themes of the films are similar: both feature slightly rotund, bespectacled little girls besieged by the weirdness of their families. Both deal with difficult issues present underneath the surface of many, if not most, American families: despair, distance, failure, neglect. And both have the "squirm" factor (I don't think Solondz has made a film that doesn't).

The difference is that Solondz's film is bleak: it leaves us with no easy resolution, no happy coming together in the way *Sunshine* does. We are left with a perverse taste of disquietude at the end of *Dollhouse*, the future of Dawn Weiner (Heather Matarazzo) uncertain. Furthermore, we are certainly left with the sense that something disturbing is happening beneath the façade of the material wealth and airbrushed appearance of the suburban 1990s family.

And it probably was. We all have eccentricity and liminal figures in our families (the story above is the tamest of Ruby tales). So I'm glad Solondz is telling these stories. It's important to see our own realities represented in the culture—it can help us feel less isolated, less fringe.

But I don't enjoy Solondz's stories the way I did *Little Miss Sunshine*, whose happy ending neither disappoints nor cloys. We know the family's awkwardness will persist. We know more strangeness is to come. But we also know that families can overcome their individual weirdness to bond together as one, to support and love one another in the face of the larger culture's weirdness.

Even if it is to load Grandpa's cold, dead body into the back of the van.

Oscars a Snooze

Andrew Aschenbrenner
Entertainment Editor

The 79th Academy Awards were pretty dull, in case you didn't watch. A year with many great movies and tough competition suggested a more exciting ceremony, but instead the Oscars felt like a simple parade of people across the stage.

First-time host Ellen DeGeneres tried her best to inject life into the subdued event, but she fell short. To be fair, she didn't have much to work with. The order of the awards left five of the six major honors to the end, and it's always boring to watch filler sketches in between presentations of technical awards.

Martin Scorsese finally won an Oscar, and *The Departed* took home four statuettes. *Pan's Labyrinth* missed out on the Best Foreign Film award, but won three others, including Cinematography.

As for the Oredigger picks from the February 7th issue, Chase led the way by picking thirteen categories correctly. Bruce and I picked nine correctly, and Adam picked eight correctly.

Here's hoping for many great films in the year ahead, and a better, more exciting 80th Academy Awards.

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THE OREDIGGER

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Oscars Gone Political

Adam Freeland
Staff Writer

Al Gore, who "used to be the next President of the United States" (despite saying in 2000 "I offer my concession"), was the star of his own film in which he used the word I more time than I can count. He proceeded to lecture his audience, both in the film and in the theatre, on how the end of what we call our society is at hand. Global Climate Change (formerly Global Warming), not the wrath of God, is going to lead us to our end.

Al Gore, in more ways than one, reminded me of the stereotypical "end times" minister. He spoke of a horrible future that awaits us if we do not repent now. He used religious-like guilt to make us feel that we are solely responsible. He showed us a way to avoid that horrible future. And, perhaps most important, he has no intention of following his own preaching. For all of this, he received an Oscar (along with his movie's song). This, along with 'Fahrenheit 911' has led be to conclude that you need to make a leftist propaganda film to win Best Documentary, or just be really, really fat.

Looking back on the last 100 years and the claims of science, I try to avoid the "fads". The current mentality behind Global Warming seems to play on the guilt that people are so ready to feel. With a more secular society pulling forward, and religion taking a back seat, it is not hard to see how this ideology could take root. That aside, we need to look at the science and politics behind it.

Global Warming is, most likely, happening. That is not the dispute. The dispute lies in the human contribution to it. There is not a uniform scientific consensus. There is, however, a uniform print media consensus. There have been numerous documented cases of scientists being threatened, with their jobs and grants, if they attempt to publish anything contrary to human-caused Global Warming. I do not claim that all scientists speaking out do not have ulterior motives. For us to have good science, especially in an area that could have such dire economic and global consequences, we need to have blind science. Scientists need to *not* know where their grant money is coming from, whether it is an oil company or a politician. We need them to come up with a model that both would have predicted climate alterations, to a reasonable degree of accuracy, the past 30 or so years, and is capable of predicting for at least the next 10-15 years with a reasonable degree of accuracy. If the model fails and needs to be modified, we would need to restart the time period. We need a model good enough to predict, not one so good that it could have predicted.

With this model, we would then be better able to assess the situation. If we are at fault to a reasonable degree, and action needs to be taken, we would then know precisely what action. If we are not at fault, then we can move on. Premature action based on a perceived scientific consensus has yielded horrible results before. From the early 1900s to just after WWII many states had policies of sterilizing "imbeciles" in order to prevent their reproduction. Over 65 thousand were sterilized against their will; all because science said that they were inferior. Politicians, then and now, are all too eager to be on the side of science. Science is not bad; it has bulled us form a small 175 foot first flight in 1903 to sending a crew to the moon in 1969. Science will save us, but the possible over-publicized pseudo-science and rush to judgment of global warming has a potential to ruin the American economy. We must be careful.

Duffy's Corner

Kevin Duffy
Staff Writer

The Resident Assistant selection process at the Colorado School of Mines is broken. The process seeks to filter out the numerous applicants into a pool of deserving and capable individuals. The CSM community deserves to know that this process is performed under the leadership of fifth and sixth year seniors through a system of innuendo and trivial condemnation. Responsible leadership is called for in student life.

The RA's perform the fundamental job of keeping order and sanity in a hall of 20 plus screaming freshman. For their service, they are awarded a contract with CSM valued at over $5,000. Clearly, this amount displays the level of seriousness the administration places on the role of the RA. One would assume then, that such a position of prestige and responsibility would demand an interview process based on substantive criteria, judged by qualified individuals. The current system, however, leaves much to be desired.

The current selections process involves a paper application and three separate interviews with current Hall Directors of Residence Life. The idea behind so many interviews is to weed out candidates in a progressive manner until the staff is finally able to award contracts. This seemingly just process is shattered when one examines the specifics. The first interview, dubbed the "large group interview," is an evening of 30 or more individual candidates playing get-to-know you games such as telephone and charades. The Hall Directors and their RA followers herd the applicants around like cattle, directing them to various stations. One station, for example, invites the applicants to draw their favorite animal and describe why they are represented by it. Yet another station invites the applicants to envision they are stranded on the opposite side of a raging river and must use wooden blocks to cross safely.

On a certain level, this foolishness can simply be dismissed as the usual "fluff" that occurs in many interviews. Unfortunately, Residence Life has made it a standing policy to base their decision solely upon this criterion. Several business professionals, not associated with CSM, almost fell over laughing, in both amusement and disgust, at the notion of a professional interview being conducted in this manner. One executive who wished to remain anonymous said, "…if I were asked to interview in this manner for a position, I would pack my bags and go work for their competitor. Unfortunately the students of CSM do not have that luxury. It is not as if you can apply for in RA position in Boulder, you must demand change and accountability in your own organization."

Further compounding this disastrous process is the fact that trained administrative faculty of CSM are not directly involved with the process. The RA selection process is completely handled by the RA selection committee, which is chaired by current Hall directors and staffed by returning RA's. While everyone agrees that the Hall directors should have input in the process, the idea of giving them absolute control over who receives the contract is sickening. Bluntly put, they do not possess the professional discipline to differentiate personal bias and social innuendo with the skills necessary to perform the duties of the position. Rejecting a highly qualified individual at the first stage of the interview process because they do not feel an immediate social bond, is not an acceptable answer to the CSM community.

The ultimate goal in Residence Life is to create an elite assemblage of individuals who laugh all the way to the bank; knowing their social eccentricity unjustly catapulted them to success. It is time to get real, and take off the boxing gloves. The students of CSM deserve and demand better than this; we insist on accountability.

Please send Duffy your local concerns: kduffy@mines.edu.

What McBride Stands For

Dr. Loring Abeyta
Op-Ed Author

On Thursday, Feb. 22, I had a delightful meeting with a high school Junior and her mother, whom I will call Jane and Mrs. Doe, regarding the McBride Honors Program in Public Affairs for Engineers. Jane and her mother were "college shopping," and Jane's outstanding accomplishments in a New England high school put her in a position of being able to choose among any number of top-ranking colleges in the nation. The Colorado School of Mines was on their itinerary, and they were particularly interested in the McBride Honors Program. As the Interim Principal Tutor and Director of the McBride Honors Program, talking about the Program with prospective students is one of my regular duties that I particularly enjoy since I get to meet young people who are among the top students in their high schools and are clearly motivated to achieve excellence in their college careers.

Many of the details that I discussed with Jane and Mrs. Doe can be found at the McBride Honors Program web page, located at http://www.mines.edu/academic/mcb_honors/. However, I do want to highlight some of the features of the Program that I covered with Jane Doe and her mother.

Mrs. Doe had questions that any parent would ask about the governance and professional oversight of the McBride Honors Program. Particularly because this is an honors program in the humanities and social sciences on a science and engineering campus, Jane's mother was curious about how the Program staffs courses for a minor in Public Affairs. I explained to both Mrs. Doe and Jane that the Program has a Tutorial Committee which is comprised of faculty from across the CSM academic and administrative departments. While it is expected that Tutorial Committee members will teach McBride courses during their terms of service, the Program also brings in adjunct faculty experts from the surrounding community of colleges, industry, and professional organizations to lead seminars as Principal or Associate Moderators. The credentials and experience of these faculty experts make them valuable contributors to the learning environment for McBride scholars. In any given semester, the Tutorial Committee will be comprised of science and engineering faculty as well as faculty with expertise in political science, economics, international relations, or other areas in the liberal arts. The proportions of the represented disciplines will vary from one semester to the next, depending on the moderators that we bring in from outside the campus, but there is always a mixture of science, engineering, social science, and humanities faculty.

These diverse faculty members of the Tutorial Committee team up to teach seminar courses that emphasize student discussion and active learning. From the Program's inception, the seminar format has been the hallmark of the McBride pedagogy and curriculum. This allows McBride scholars to explore in depth the complex issues that exist at the intersection of science, engineering, and human communities. The outcome is that after their graduation, McBride alums enter the world of public affairs (including industry, government, non-profit, and other civic organizations) with the dual advantage of expertise in the language, method, and contributions of science and engineering as well as public affairs. They can then serve the public good by "interpreting" between the world of science and engineering – which has an increasingly prominent place in the discourse of public affairs – and the world of civic involvement in which they have been educated through the McBride Honors Program.

This is what is unique about the McBride Honors Program, and what gives it the vitality for which it has been noted over 28 years on the CSM campus. The McBride Program serves as a "nexus" within which some of the most vital dialogue about the interface of science, technology, and human communities occurs. Dr. Robert E. D. Woolsey, a member of our Tutorial Committee a number of years ago and a Mines Emeritus Professor, said that the McBride Honors Program "…is founded on the ideal that pure technical problems do not exist – only those embedded in political, cultural, ethical, and moral problems. Our purpose is to produce a graduate who will both know and act on this reality."

McBride graduates are different than typical college or university graduates who go into public affairs and have majored in, for example, political science. McBride students major in the sciences and/or engineering, and are starting at a different point of inquiry about public affairs and public policy because they are entering the field from a completely different vantage point than their peers who are liberal arts majors.

During the course of their studies, McBride scholars do have a curriculum that all enrolled students follow, as would be expected of any honors program at the college level. The students take a Freshman seminar that introduces them to a common foundation of knowledge that will retain its relevance through the three and a half years that they are in the Program. In their Junior and Senior years, the students have choices among courses, thus allowing them to follow a track that appeals to their future career interests more directly. For example, students choose between participating in a foreign area study that allows them a cultural, academic, and social immersion in another country, or the students go on a one-week trip to Washington, D.C. as part of a seminar on U.S. foreign and domestic policy.

See MCBRIDE, Page 13

Letters to the Editor

Dear Editor,

I wanted to share information on Autodesk's latest commitment to furthering design and engineering education. I understand your school has a large student population interested in pursuing careers in engineering. Students can log on to www.students.autodesk.com for free software downloads, tutorials, job postings and other ways to connect with peers and faculty across the world. If anyone on your editorial staff is interested in knowing more about the latest Autodesk technology for students, please contact me at julieanna.little@edelman.com Many thanks!

Sincerely,

JulieAnna Little Edelman for Autodesk

Dear Editor,

I logged on to Facebook the other morning. I always take the time to read that first page after you login that tells you what you're buddies have been up to. And I find that one of my buddies joined a group titled "I have been harassed by Mines Public Safety." Now, I have no problem with folks wanting to go somewhere and complain about anything. However, it is this group's stated goal to gain enough support to go to the dean, board of trustees, and all local news stations in an effort to discredit Mines Public Safety. This group sees a problem with Public Safety doing their job. I hate to be the one to rain on their parade, but if you break the law, you deserve to be punished.

I read down the wall, reading their complaints, and there may be one legitimate complaint in a list of 15. Rolling through stop signs is illegal. Skateboarding on campus is against campus rules and you can be ticketed for it, something that has been sent multiple times in emails to the entire student body. Jumping on your friend's bumper and riding there while he is moving is illegal. Parking in a no-parking zone is illegal. Parking in a reserved space without the proper parking permit is a ticketable offense.

The people in this group claim that public safety has harassed them, when all of the complaints seem to be about getting in trouble for breaking the law. Now, I'm not saying that public safety never makes a mistake, or never crosses the line, they're human, they make mistakes. However, I feel that this group needs to take a step back, look at the situation with unclouded eyes and decide if the action they are proposing is the proper action. If they have a legitimate grievance against public safety, then they should start by going to Nan Braddock, Director of Public Safety, and voicing their concern. If Director Braddock cannot resolve the issue, then they need to find out who the next person up the chain of command would be and go talk to them. I truly doubt that it would ever become necessary to spread slanderous gossip to the news agencies, dean, or board of trustees if the grievance is legitimate.

Sincerely,

Christopher Ekberg

Dear Editor,

I was less than impressed with your cover article "Student Life Sees More Changes" published in the most recent issue of the Oredigger. While I've never been a big fan of the Oredigger, I would still pick it up on occasion, just to see if it had gotten any better. This week's article definitely swayed me away from your publication.

In specific, as I turned to the 2nd page of the article, and found the paragraph describing Mr. Francisco's DUI charge and probation, I simply rolled my eyes at the irrelevant revelation of this fact.

Mr. Francisco's life outside of the Mines campus has absolutely nothing to do with anything, and is of no concern to anybody but Mr. Francisco, his family, and the Jefferson County court system, and in the event that it relates to terms of his employment, then to his Superiors at Mines.

Bringing up Mr. Francisco's record has no purpose, and does nothing to contribute to this article but to be a cowardly swipe at him. Mr. Aman's abuse of the Freedom of Press has further disgusted me with the overall poor quality that your publication passes on as well written news reporting and has removed any interest I ever had in reading it. If Mr. Aman had a problem with Mr. Francisco, then using the Oredigger to "get back at him" by means of publicizing private misdeeds is certainly an inappropriate way of making retribution.

If your goal is to uncover all the "dirty secrets" that relatively unpopular faculty and staff may have, and if you simply wish to continue the "good riddance" cry in response to Bob Francisco's departure, then I wish you all the ill will in the world, and I hope that your pitiful little mudslinging tabloid is simply laughed at and eventually fades into obscurity.

Sincerely,

Andrew J. Martin

McBride Program

Continued from Page 12

Both trips are partially subsidized by the McBride Honors Program, meaning that the students have an opportunity for in-depth study through domestic or international travel at a fraction of what it would cost them if they engaged in these activities independently.

As my meeting with Jane and Mrs. Doe came to an end, I emphasized that the McBride Honors Program inspires a high level of commitment to the Program on the part of McBride students. We have many alumni who continue to contribute to the Program, both financially and through their participation in McBride events. For example, our guest speaker at the Freshman Reception in November, 2006 was a notable McBride graduate. In 1982, Dr. Dean Thomas was a member of the original graduating class of the McBride Honors Program. He went on to receive his doctorate at the Institute for Theoretical Physics at the State University of New York, and is now on the staff of the Institute for Defense Analysis. Dr. Thomas has remained dedicated to the McBride Honors Program over the years, which has been demonstrated by his return to the CSM campus on two occasions, including this most recent visit, to speak to McBride students.

Our current McBride students exemplify their commitment to the McBride Honors Program in various ways. We have a very active group of student representatives to the Program, and these student representatives are given the opportunity to participate in the Program's Tutorial Committee meetings. While administratively they don't have a vote, they certainly have voice, and have made valuable contributions to our Program discussions of curriculum, the role of the McBride Program on the CSM campus, and student involvement.

This McBride student commitment is exemplified by Hilary Brown's editorial. Her summary of concerns took much thought and effort. While there are some inaccuracies in her editorial there are many valuable points, as well. What is important to note about Ms. Brown's editorial is that she wrote it in the best of the McBride tradition. She is voicing her concerns through one of the most important institutions of any free democratic society: an uncensored media. She has raised issues that are indeed of concern to all stakeholders in the McBride Honors Program. In writing the editorial, Ms. Brown has exemplified for her peers one of the primary outcomes that we hope to see in our McBride Honors Program students: the willingness and courage to "project and test the moral and social implications of their …professional judgments and activities" (as stated in the CSM undergraduate bulletin description of the McBride Honors Program). In speaking her mind, Ms. Brown has done just this.

In that regard, I do hope that after leaving our meeting at the McBride House, Jane and Ms. Doe found that week's copy of the Oredigger and were able to see the McBride Program "in action" through the contributions of one McBride student to the arena of public debate on the CSM campus.

Corrections

In the editorial entitled "Improving McBride: A Great Program With Room to Improve" that ran in the February 21 issue of The Oredigger, there were two factual errors.

First, the statement that regarded the 28 McBride "moderators" was actually talking about the 28 members of the McBride Tutorial Committee (mines.edu/academic/mcb_honors/committee.html).

Second, Dr. McBride was regarded as the "founder" of the McBride Honors Program and this is not true. Dr. McBride was the President of the Colorado School of Mines during the program's founding. Dr. Tom Philipose worked with multiple faculty members across many departments to create the program. Dr. McBride had always been a strong supporter of the program and it was renamed in his honor in the mid-1980s.

The Oredigger apologizes for these errors.

A Note from the Editorials Board

The article regarding Bob Francisco that printed in the February 21 issue of The Oredigger discussed multiple, and factual, aspects of Bob's tenure at Mines.

We have worked with Bob on multiple occasions and always found him to be courteous and helpful; we can assure you that our actions in no way represented an attempt to "get back at" him.

It has been the goal of The Oredigger for the past 87 years to abide by the highest journalistic standards in all situations.

In this situation, we chose to print only the information that we had multiple, confirmed sources for, though we easily could have added the entourage of additional stories we uncovered. Furthermore, we felt it would be immoral to intentionally withold information from the student body.

Just Stop Talking

Andrew Aschenbrenner
Entertainment Editor

First of all, this is in no way suggests that the people mentioned have no right to say what they said. Free speech is the greatest element of this country, and all forms must be allowed, however threatening. This is merely a rant and a suggestion that the people mentioned would be better off if they just kept their mouth shut.

It's been an interesting time of quotes and events, but let's start with James Cameron. Saying that you've found the tomb of Jesus without undeniable justification is not smart or respectful. Cameron decided that he wanted to make a movie more ridiculous than Titanic, and call it a documentary. Mr. Cameron, call me back when you have a reliable script.

Next on the list is John McCain, who has recently decided that he can make everyone in the Republican party forget everything on his voting record. McCain has looked like a fish out of water, and managed to declare his candidacy in the same breath in which he made it irrelevant. He told David Letterman's audience, "We wasted a lot of our most precious treasure, which is American lives over there." Wasting American lives. Nice touch. Especially when you have been referred to as your party's "war candidate." Mr. McCain, you might want to decide on a platform before running around and trying to make everybody like you.

Jumping on the Presidential-candidate-with-Tourettes bandwagon is Mitt Romney, who announced that he was enjoying the Hillary-Obama feud before attacking his fellow Republican candidates. Apparently he was enjoying the feud so much he decided to start his own. Maybe it's because Romney is so behind in the polls, he felt like his only chance was to lower everyone's poll numbers. Good luck with that. Since attacking Rudy Giuliani for being pro-abortion, pro-gay rights, and anti-gun, Giuliani has taken the lead among Republicans in the race for the nomination.

What would a rant be without a criticism of another stupid quote from our President? Bush recently added to his many statements of incompetency. He must have decided that his utter denial of reality wasn't enough. Comparing the war in Iraq to the Revolutionary War is like comparing Bush to Ronald Reagan. Sounds nice, but it just doesn't work. How about you try comparing quagmires to quagmires, and traitorous fools to traitorous fools?

Also making the headlines, this time for a rather tame quote, is Ann Coulter, everyone's favorite faux-conservative firebrand. Her quote at the Conservative Political Action Conference (CPAC), which referred to Democratic Presidential candidate John Edwards as a faggot, was almost funny. The use of the word and the accusation wasn't the funny part. What was funny was that Coulter used the slur to gain attention. Apparently insulting 9/11 widows isn't enough to keep up media coverage. Maybe she'll start spewing raw sewage soon.

Joining the fun at CPAC is fellow wacko Newt Gingrich. Newt was recently in the news for advocating limitations on First Amendment rights, specifically free speech. Wow, Newt! That would make America, let's see, NOT AMERICA. People like Gingrich deserve to be implanted with magnets and forced to undergo an MRI. At CPAC, Newt said that the residents of the 9th ward of New Orleans were "so uneducated and so unprepared, they literally couldn't get out of the way of the hurricane." Sensitive! To top it off, Gingrich declared that this was a "failure of citizenship." Doesn't this guy know how to think and speak all at once?

Making the list from the Bush cabinet is the most powerful lawyer in the country: your Attorney General, Alberto Gonzales. After eight U.S. attorneys were fired at the end of last year despite good performance reviews, his Department of Justice has come under scrutiny. The scandal-in-the-making has drawn Congressional subpoenas for Gonzales, who has replied that he was too busy to respond to those pesky legal demands for information. Said Gonzales, "I think the American people would lose...if I spend all my time responding to subpoenas." Translation: "I'm too busy to follow the law." What a surprise, it's another Bush administration official denying that they have any responsability for anything. It's ok. I can rest easy in the knowledge that if I ignored a subpoena, I would be held in contempt and arrested. What a nice present from the person who is supposed to symbolize law in America.

Finally, we have one of my favorite people of all. For those of you who don't know, Michelle Bachmann is a newly elected U.S. Representative from Minnesota. I first learned who she was when I watched her grab the President following the State of the Union address, not letting go for 30 seconds, until he paid her just a little bit more attention. Upon further research, I learned that she is generally regarded by her former colleagues in the Minnesota Senate as a nutcase. It isn't hard to understand why. Her voting record defies logic. Quotes like "...The black tsunami that went across our nation on November 7th" and her recent stunner prove to me that she's the biggest nutter in Congress (Katharine Harris RIP). She was quoted by the St. Cloud, Minnesota Times as saying, "[Iran is] going to get half of Iraq, and that is going to be a terrorist safe haven zone where they can go ahead and bring about more terrorist attacks in the Middle East region and then to come against the United States because we are their avowed enemy." Wow, Michelle. The next time you want to open your mouth, reconsider. Or better yet, just stop talking.

Letters to the Editor?

E-Mail "oredig@mines.edu" or go to oredigger.net and click on "Letters to the Editor."

CSM Baseball Off to Rocky Start in RMAC

Orediggers End Three-Game Losing Streak; Improve to 4-7 Overall

By Chris Phillips
Business Manager

The Colorado School of Mines Baseball team has started the 2007 season with a 4-7 start (2-1 RMAC). The season opened on a sour note for the Orediggers with three straight losses, but their recent 2-1 series win over Regis may be indicative of things to come.

The opening series for CSM was played at Eastern New Mexico from Feb. 9 – 11. The Orediggers lost the first three games of the series 3-2, 9-2, and 5-4, but came back to win the final game 16-12. During the first three games, CSM was led by first baseman Mike Deal (Highlands Ranch) with four runs batted in and one home run. Center fielder Nick Walker (Denver) and right fielder John Naccarato (Parker) both had two RBIs.

The Orediggers' scoring exploded during the fourth game of the series. Deal had six RBIs and two home runs, and Naccarato had one RBI to his name. Designated hitter Stefan Revielle and third baseman Matt Owens both had two RBIs. The scoring for the Orediggers was rounded out by one RBI each from second baseman Caleb Rudkin, shortstop Aaron Gremmer and catcher Scott Hensley. Matt Thome pitched the winning game for the Orediggers with two strikeouts, two earned runs (six runs total) and seven hits during his five innings on the mound.

CSM's next series was another four-game series, but against Central Washington. This series was played in Pueblo from Feb. 16 – 18, and the Orediggers went 3-1 yet again. They opened the series with an 11-10 win, and then lost their last three 14-1, 3-2, and 16-14 respectively. The opener was won by the Orediggers in the 10th inning. The score going into the inning was 9-9, and Central Washington's Michael Johnson brought in what could have been the game-winning run before CSM went up to bat. The Orediggers came back to win off of a throwing error and a sacrifice bunt by Naccarato. Revielle, playing left field for the game, led CSM with three RBIs. Catcher Anthony Siderius (Castle Rock) and Gremmer each had one RBI for the day. Marshall Schuler (Anaheim, CA) earned the win with one hit allowed during his one inning of play.

The next game proved to be difficult for CSM. CWU had 12 RBIs in the first part of their double-header vs. Mines, whereas the Orediggers were only able to score off of an RBI provided by Walker. Later the same day, CSM lost 3-2. They went into the seventh propelled by RBIs from Deal and Naccarato and with the score tied 2-2, but CWU's Tyler Farrington posted a two-out single RBI to bring in the game winning run.

The fourth game of the series looked like it was going to end in much the same way as the second game of the series until the eighth inning. CWU led the game 15-6, but the Orediggers rallied to score four runs in both the eighth and ninth innings. Despite the rally, the Orediggers weren't able to overcome the nine-run deficit in time. CSM was led by Revielle with three RBIs. Rudkin, Naccarato and Walker all posted two RBIs apiece, and Deal, Gremmer and Hensley all had an RBI.

Conference play proved to be more profitable for the Orediggers. In their RMAC opening series on Mar. 3-4 against Regis, the Orediggers went 2-1 with the scores being 6-4, 17-5, and 10-3, respectively. Pitcher Cris Rogers earned his first career win for his performance in the opening game. He had five strikeouts and allowed four runs (one earned) and six hits during eight innings. The hitting was led by Rudkin, Walker, Deal, Gremmer and Owens, all of whom had one RBI. Walker had the game-winning run after Rudkin drew a two-out walk in the ninth to set it up.

The second win of the series allowed the Orediggers to split the double header. Rudkin and Hensley had three RBIs apiece in the 10-3 win. Revielle put up two RBIs, and both Walker and Deal added one RBI each. Schuler earned the win to bring him to 3-0 on the season. He had four strikeouts and allowed three runs (one earned) off of seven hits during the seven innings that he pitched.

Courtesy CSM Athletics
Caleb Rudkin had three RBIs in the series against Regis

CSM will return to the field on Friday at 7:00 PM against CSU-Pueblo. They will be hosting a four-game series over the weekend.

CSM Men's Playoff Hopes Fall With Season-Ending Loss

By Mike Stone
Staff Writer

The Colorado School of Mines Men's Basketball Team finished up their season two weekends ago with a record of 14-13. A part of the Rocky Mountain Athletic Conference (RMAC) East Conference, the team has had a long and productive year, but couldn't make it to the RMAC Shootout.

Over the year, CSM Basketball had some strong showings and a few upsets. In December, Mines beat Texas A&M Commerce 84-80, and, just a month later, squeezed out a win over Chadron State 59-58. Their greatest spread of the season was against Western N.M., winning by 29 points, 79-50. Mines even beat Regis 81-55 in February, and Regis went on to win the division last weekend.

Mines' hope for playoffs faded in the last weekend of the season when the Orediggers lost to Colorado Christian 66-53 and first-ranked Metro, 81-71. This became a slow end to a successful year for Mines but they still ended up finishing with a winning season.

This year was head coach Pryor Orser's 6th season as the Head Coach of Mines. With a record of 75-88, Orser has made drastic changes to Mines basketball after a first season record of 5-20. Individual players as well as team talent have improved greatly. There has been no word of Orser ever leaving, he is deeply committed to the team and the sport of basketball.

This year, three players from Mines made All-RMAC teams. Senior guard Franklin Ryk was on the Honorable Mention All-East Division Team while Senior Forward Ian Elseth and Sophomore guard Kyle Pape made the All-RMAC East Division Second Team. These players were essential to Mines' success this year as they showed leadership on the court with statistics and character. Every one of the graduating seniors will be missed.

Another honor received by the team was having players on the All-Academic Teams. Seniors Ian Elseth and Davey Iverson made the Men's Second Team, while Junior Ben Mohr, Sophomore Casey O'Hayre and Sophomore Grant Gunhus were named to the Honor Roll.

Last season, the Orediggers had a record of 15-14 and made it to the semi-finals of the RMAC Shootout Tournament. Their quarter-finals win against Fort Lewis was their first RMAC Shootout victory since 1996 and showed the RMAC that Mines was a team to be feared. Mines will loose 5 graduating Seniors this year including Ryk and Elseth. Next year is sure to be tough, but well worth the surprises to come from a predominantly Junior-based team.

A few noteworthy statistics from this season include a record of 11-1 when scoring 70 points or more. Mines is also the top team in the conference in scoring defense (64.2 ppg) and blocked shots (3.4 bpg). When three players scored at least ten points in a game, the Orediggers wer 13-2. Finally, Mines was 11-4 at home this year and 42-10 over the last couple of years.

CSM Women Reign in Season Finale

Courtesy CSM Athletics
Senior Iva Tomova helped CSM reach a 15-13 season

By Mike Stone
Staff Writer

The CSM Women's Basketball Team finished their season this year by making an appearance in the quarter-finals of the Rocky Mountain Athletic Conference (RMAC) Shootout last Wednesday. Sixth-seeded Orediggers lost a frustrating game to third-seeded Metro State, 69-56. The team finished with an overall record of 15-13.

Mine's loss against Metro was a "nailbiter," as the Orediggers, though always trailing, kept making comebacks to Metro's power style and getting within 4 points several times and within 2 points at 9:17 in the game. At the foul line, the Orediggers couldn't take advantage of opportunities. Metro state got 21 points on fouls and Mines only 2. Metro went on to the Finals, but lost to Regis on March 4th.

The Head Coach for the Women's Team is Paula Krueger. She is in her fourth year of coaching Mines basketball. Her talents and unique coaching style have turned the program around. With a record of 4-23 the year before Krueger arrived, she quickly took charge bringing the team to a record of 12-16 her first season and appearing in playoffs the next three years.

In the 2004/05 season, the Orediggers had their best performance in program history with a 19-9 record and 13-6 in the RMAC. That year, they lost to Fort Hays State in the quarter-finals 81-53. Last year, the team made it all the way to the finals, facing off against CSU-Pueblo. With the score 34-33 at half, Mines pulled ahead and was up 50-47 with 8 minutes to go. After holding on, the Orediggers made a few key mistakes and lost 65-54.

This year, two members of the squad made All-RMAC teams. Senior center Angela Pearson received an Honorable Mention All-East Division Team spot, while Senior guard Iva Tomova made the First All-East Division Team. Pearson led the team with 6.1 rebounds per game and managed two double-doubles in the season. Tomova led the team in assists, steals, and an average of 16.7 points per game. This is her second appearance on an All-RMAC team.

As for the All-Academic teams, Junior Emily Przekwas, Junior Liz Jeffries, and Sophomore Julie Marshall received the Honor Roll Team positions.

Mines will loose 3 graduating Seniors this year. Hopefully, next year Mines can pull off a RMAC title, given that 3 starters this year were freshmen and with another year of experience comes a lot of talent and team blending.

Fool's Gold

$FeS_2 \neq Au$

Chase Hoffman/Oredigger

The Prestige of the 'M' could bear new meaning to alumni away from home

U of Michigan announces plans to buy the "M"

Adam Freeland
NCFE Executive Investigator

A series of events set in motion by the recent storms has put the Colorado School of Mines into severe debt. The storm itself delayed construction of the new Recreation Center both at the construction site and in the supply chain. At last month's National Collegiate Financial Executives (NCFE) convention, this dire financial situation became evident. It was during this discussion that the University of Michigan made its move. In what Dillon Webb, the Michigan NCFE representative, called an "offer for the future,"

Webb announced the intention of his university to purchase the Mount Zion "M."

This did not come as a surprise to many readers of *Higher Education and Out-Of-State Expansion Weekly* magazine. The University of Michigan has been, for the past 4 years, buying large scale "M" paraphernalia. The policy started when a graduate of Montrose High School, Jason Hall, attended the University of Michigan and then went on to become the Student Body President. Jason persuaded the board of directors of the school to purchase the Montrose High School "M." The policy has continued as the University purchased the Miami Tech "M" and, most recently, the Minneapolis Community College "M."

Webb has assured the Mines community that the proposed offer would only slightly alter the current tradition of the school. Incoming freshmen would be required to wear hard hats that bear the official seal of the University of Michigan when climbing to the "M". Perhaps the most drastic changes would not be seen until the traditional countdown to commencements on the mountain. This tradition's timing would be altered to coincide with the various department graduations at Michigan. This may never happen, though, as Howard K. Stern has claimed to be the biological father of our "M" and is suing for custody.

Ritter, Global Warming Good

Mike Stone
Senior Hotness Expert

Governor Bill Ritter announced Sunday that he is "Pro-Global Warming." This came as a shock to political analysts across the state, noting it was political suicide. There are several "hot topic" issues in the upcoming elections. They include the Iraqi War, illegal immigration, Star Wars Episode 7, global warming, etc., but no one foresaw the support of global warming by Ritter.

Bill Ritter grew up on a farm East of Aurora and was the 6th of 12 children. It is believed that he first became interested in the atmosphere and aerosol sprays in the fields. His hair was perfect as a child. "I became Governor to make a difference. With Colorado's help we can speed up Global Warming," stated Ritter. He went on to note that Colorado is the worst state in the country for producing salt-water fish. His plan is to increase this number by making the ocean come to Colorado.

"Imagine it- Surf sunny Colorado by day and ski its mountains at night. Colorado's economy will skyrocket!" claimed the Governor. When asked about all the states and countries at lower elevations, he offered solace in Colorado for all seeking great hotels and fabulous tourist attractions.

The announcement came after a second month of snow storms around Colorado causing snow plow logistical nightmares. Ritter finished the press conference saying; "I've been so cold lately, I just want it to be warm again and summer is too far away."

Scientists Confirm Link between Fighting and St. Patrick's Day

Mike Stone
Chief Correspondent on Beeranomics

Scientists at *Guinness Laboratories* have discovered a shocking truth behind St. Patrick's Day and drinking alcoholic beverages. According to lead Scientist Patrick Shamus Nickerson McFlanigan, 97.5% of all fights on St. Patrick's Day are related to alcohol. Overall, fights rise from an average of 2,000 per day internationally to nearly 3.3 billion on March 17th. McFlanigan says the jump is due to celebratory drinking on St. Patrick's Day all over the world.

St. Patrick's Day is a day of remembrance for missionaries all over the world. It is celebrated on what is believed to be the day St. Patrick died. He was known to drive the snakes out of Ireland on a single day by drinking a keg by himself, chasing them naked through the streets and jumping in the freezing Dublin River.

Guinness Laboratories' announcement has sent shock waves through the entire Irish community. The Irish People's Free Libertarian Youth (I.P. Freely) spokesman Thomas O'Shea responded sternly saying, "St. Patrick's Day is a day of remembrance and not a day of drinking. Very few Irish people have drinks on March 17th."

The Irish people are known for inventing beer and in the process, doom civilization.

In the United States, the biggest proponents of St. Patrick's Day are Boston, New York and Chicago, where businesses are closed, parades occur, and rivers are dyed green. These three cities along with Dublin are where 2.7 of the 3.3 billion fights occur. There has been no public outcry to stop the drinking and fighting, but police are cracking down.

Boston Police Chief Brian Roberts claimed, "This yeah, the Boston police depahtment will arrest anyone seen drinking in Hahvahd Yahd, driving their cah, or naked in the pahrade." This comes at the outrage of AA rejects and drinkers everywhere. Kerry Marie of Boston shouted, "There's no rules on St. Patty's," and: "Everyone's Irish on St. Patrick's."

Scientist McFlanigan commented on the discovery process, noting the trial involved a control room with 4 men and 1 woman with water. The experiment room involved 4 men and 1 woman in a room with 5 kegs. Sure enough, after several pitchers of beer, the men started fighting over the woman while the control room played Scrabble.

Ivan and Connor McMannis from Boon Dock Saints offered no comment on the correlation of beer and fighting.

Mike Stone/Oredigger

Onsite investigation showing the natural pugnacity associated with alcohol.

Number Theory

1423

Days since the declaration of "mission accomplished"

$775,773 per student

The endowment per student at Princeton University [4]

87.7%

The percentage of post-docs awarded in the engineering field to men as of 1996 [4]

51,388

Enrollment at the University of Minnesota-Twin Cities [4]

1,800 courses

The number of classes that will be available through MIT's open course-ware by the end of the year [5]

1. http://www.dfw.com/mld/dfw/news/local/16775411.htm
2.http://www.slate.com/id/2161258/?nav=fix
3. Beliefnet.com
4. http://sll.stanford.edu/projects/tomprof/newtomprof/postings/57.html
5 .http://www.iwr.co.uk/information-world-review/news/2184062/mit-puts-entire-curriculum

Potent Quota-babbles

"I don't know whether we'll find him. I don't know that it's all that important, frankly,"[1]

-Army chief of staff Gen. Peter Schoomaker on the importance of capturing or killing Osama bin Laden

"I was going to have a few comments on the other Democratic presidential candidate John Edwards, but it turns out you have to go into rehab if you use the word "faggot," so I—so kind of an impasse, can't really talk about Edwards."[2]

- The always vocal conservative pundit Ann Coulter, talking about the candidates on the Democratic side at the recent annual CPAC